



# Galaxy

SCIENCE FICTION

OCTOBER 1953

35¢

AND

THE CAVES OF STEEL By ISAAC ASIMOV



OCTOBER 1953

GALAXY

Science Fiction

SECRETS ENTRUSTED TO A FEW

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# Galaxy

## SCIENCE FICTION

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Cover by EMMH illustrating THE CAVES OF STEEL

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# TO THE HILLS!

**M**ANY alleged alarmists, such as Charles Fort, have insisted that Earth has been visited by aliens from space. If their evidence weren't so unremittingly spectacular, they would have seen the truth:

*Earth is being invaded now!*

No giant ships are raining death-rays from the sky, no land ironclads flattening our cities and laying waste the countryside.

That's the truly devilish part of the invasion—it's a sneak attack, utterly silent and unnoticeable. While the stormy petrels of science are pointing out vast foot-steps and the craters of crashed ships, the weapons of conquest are in your home.

The clues are outwardly so insignificant that only a squinting eye and a suspicious mind can detect them, let alone guess their sinister meaning.

Let's piece the data together calmly, without panic. It may not be as evil as it seems, but I doubt that.

*As a child, did you or did you not have more marbles, jacks, tops and checkers than you ever bought?*

Of course you did, and so did every other child you knew.

That doesn't sound like much to get excited about, which is ex-

actly why the plot is more deadly than outright assault:

*The invasion weapons are purposely ordinary to keep us from becoming aware of the danger.*

Use this checklist. It is admittedly incomplete. No doubt you can add many more.

- When GALAXY was born, we purchased a box of 100 paper clips. *We have not bought a single one since.* A special case, you may say—they're sent in with manuscripts. Well, then, answer this: *Whenever you needed a paper clip, have you ever failed to find one somewhere or other?*

- If you can't locate a rubber band, yours is an exceptional home—and yet when, if ever, did you buy any?

- Is it or is it not a fact that you can always haul out a piece of string from drawer or toolbox? *Did you buy it at a store or just accumulate it?*

- Do you or do you not have a collection of pencils, of which you bought none or very few?

- How many clothes hangers did you yourself buy?

- Wrapping and tissue paper?

- Mucilage, glue, paste?

- Nails, screws, toothpicks?

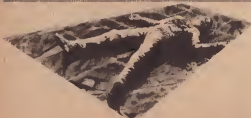
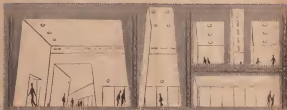
These are the deceptively innocent ingredients of the plot to  
(Cont. on page 97)

By ISAAC ASIMOV

# The caves of steel

Beginning A 3-Part Serial

*Future New York would have been a great place to live in . . . if it weren't for the deadly helpfulness of its robots . . . and the fact that someone chose the worst man in the world to murder!*



Illustrated by EM5H



## CHAPTER I

**L**IJE BALEY had just reached his desk when he became aware of R. Sammy watching him expectantly.

The dour lines of his long face hardened. "What do you want?"

"The boss wants you, Lije.

Right away. Soon as you come in."

"All right."

R. Sammy stood there with his unchanging blank grin.

Baley said, "All right, I told you! Go away!"

R. Sammy turned and left to go about his duties. Baley won-



dered irritably why those duties couldn't be done by a man.

He paused to examine the contents of his tobacco pouch and made a mental calculation. At two pipefuls a day, he could stretch it to next quota day.

Then Baley stepped out from behind his railing—he'd earned a railed corner two years ago—and walked the length of the common room.

Simpson looked up from a merc-pool file as he passed. "Boss wants you, Lije."

"I know R. Sammy told me."

A closely coded tape reeled out of the merc-pool's vitals as the small instrument searched and analyzed its "memory" for the desired information, which was stored in the tiny vibration patterns of the gleaming mercury surface within.

"I'd kick R. Sammy's armored behind if I weren't afraid of breaking a leg," said Simpson. "I saw Vince Barrett the other day."

Baley's long face grew longer. "How's he doing?"

"Working a delivery-tread on the yeast farms. He asked if there was any chance he could get his job back. Or any job in the Department. What could I tell him? R. Sammy's doing Vince's job now and that's that. A damned shame. Vince is a bright kid. Everyone liked him."

Baley shrugged. "It's some-

thing we're all living through," he said in a manner stiffer than he intended or felt. He'd liked Vince, too, and hated the vacantly grinning robot that had replaced the boy. His own foot had itched in much the same fashion as Simpson's. Not just for R. Sammy, either. For any of the damned robots.

THE boss rated a private office. It said JULIUS ENDERBY on the clouded glass. Nice letters, but individually removable. The rest underneath, "Commissioner of Police, City of New York," was carefully etched into the glass. The jobs were permanent; the job-holders were not. And with robots taking over more and more human occupations—

Baley stepped into the office and said, "You want to see me, Commissioner?"

Enderby looked up. He wore spectacles because his eyes were sensitive and couldn't take the usual contact lenses. It was only after one got used to the sight of them that one could take in the rest of the face, which was quite undistinguished. Baley had a strong notion that the Commissioner valued his glasses for the personality they lent him and suspected that his eyeballs weren't as sensitive as all that.

The Commissioner looked definitely nervous. He straightened

his cuffs, leaned back, and said, too heartily, "Sit down, Lije. Sit down."

Baley sat down stiffly and waited.

Enderby said, "How's Jessie and the boy?"

"Fine," said Baley hollowly. "Just fine. And your family?"

"Fine," echoed Enderby. "Just fine."

It had been a false start:

Baley thought: Something's wrong with his face.

He said, "Commissioner, I wish you wouldn't send R. Sammy out after me."

"Well, you know how I feel about those things, Lije. But he's been put here and I've got to use him for something."

"It's uncomfortable, Commissioner. He tells me you want me and then he stands there. I have to tell him to go or he just keeps on standing there."

"Oh, that's my fault, Lije. I gave him the message to deliver and forgot to tell him specifically to get back to his job when he was through."

Baley sighed. The fine wrinkles about his intensely brown eyes grew more pronounced. "Anyway you wanted to see me."

"Yes, Lije," said the Commissioner, "but not for anything easy."

He stood up, turned away, and walked to the wall behind his

desk. He touched an inconspicuous contact-switch and a section of the wall grew transparent.

Baley blinked at the unexpected surge of grayish light.

The Commissioner smiled. "I had this specially arranged last year, Lije. I don't think I've shown it to you before. Come over here and take a look. In the old days, all rooms had things like this. They were called 'windows.' Did you know that?"

"I've heard of them," Baley said. He had viewed many historical novels.

"Come here."

Baley squirmed, but did as he was told. There was something indecent about exposing the privacy of a room to the outside world. Sometimes the Commissioner carried his affectation of Medievalism to a drastic extreme.

Like his glasses, Baley thought.

That was it! That was what made him look wrong!

**B**ALEY said, "Pardon me, Commissioner, but you're wearing new glasses, aren't you?"

The Commissioner stared at him in mild surprise, took off his glasses, looked at them and then at Baley. Without his glasses, his round face seemed rounder and his chin a trifle more pronounced. He looked vaguer, too, as his eyes failed to focus properly.

"Yes." He put his glasses back on his nose, then added with real anger, "I broke my old ones three days ago. What with one thing and another, I wasn't able to replace them till this morning. Lije, those three days were hell."

"On account of the glasses?"

"And other things, too. I'm getting to that."

He turned to the window and so did Baley. With mild shock, Baley realized it was raining. For a minute, he was lost in the spectacle of water dropping from the sky, while the Commissioner exuded a kind of pride, as though the phenomenon were a matter of his own arranging.

"This is the third time this month I've watched it rain. Quite a sight, don't you think?"

Against his will, Baley had to admit to himself that it was impressive. In his forty-two years, he had rarely seen rain or any of the phenomena of nature, for that matter.

He said, "It always seems a waste for all that water to come down on the city. It should restrict itself to the reservoirs."

"Lije," said the Commissioner, "you're a Modernist. That's your trouble. In Medieval times, people lived in the open. I don't mean on the farms only. I mean in the cities, too. Even in New York. When it rained, they didn't think of it as waste. They gloried

in it. They lived close to nature. It's healthier, better. The troubles of modern life come from being divorced from nature. Read up on the Coal Century sometime."

Baley had. He had heard many people moaning about the invention of the atomic pile. He moaned about it himself when things went wrong, or when he got tired. Moaning like that was a built-in facet of human nature. Back in the Coal Century, people moaned about the invention of the steam engine. In one of Shakespeare's plays, a character moaned about the invention of gunpowder. A thousand years in the future, they'd be moaning about the invention of other things.

The hell with it.

He said, grimly, "Look, Julius." It wasn't his habit to get friendly with the Commissioner during office hours, however many "Lije"s the Commissioner threw at him, but something special seemed called for here. "You're talking about everything except what I came in here for and it's worrying me. What is it?"

The Commissioner said, "I'll get to it, Lije. Let me do it my way. It's trouble."

"Sure. What isn't on this planet? More trouble with the Rs?"

"In a way, yes, Lije. I stand here and wonder how much more

trouble the old world can take. When I put in this window, I wasn't just letting in the sky once in a while. I let in the City. I look at it and I wonder what will become of it in another century."

**L**IJE BALEY felt repelled by the other's sentimentality, but he found himself staring outward in fascination. Even dimmed by the weather, the City was a tremendous thing to see. The Police Department was in the upper levels of City Hall, and City Hall reached high. From the Commissioner's window, the neighboring towers fell short and the tops were visible. They were so many fingers, groping upward. Their walls were blank, featureless. They were the outer shells of a giant human hive.

"In a way," said the Commissioner, "I'm sorry it's raining. We can't see Spacetown."

Baley looked westward, but the horizon had closed down. New York's towers grew misty and came to an end against blank whiteness.

"I know what Spacetown is like," Baley replied.

"I like the picture from here," said the Commissioner. "It can just be made out in the gap between the two Brunswick Sectors. Low domes spread out. It's the difference between us and the

Spacers. We reach high and crowd close. With them, each family has a dome for itself. One family, one house. And land between each dome. Have you ever spoken to any of the Spacers, Lije?"

"A few times. About a month ago, I spoke to one right here on your intercom."

"Yes, I remember. But then I'm just getting philosophical. We and they—different ways of life."

Baley's stomach was beginning to constrict a little. The more devious the Commissioner's approach, the deadlier he suspected might be the conclusion.

He said, "All right. But what's so surprising about it? You can't spread eight billion people over Earth in little domes. They've got space on their worlds, so let them live their way."

The Commissioner walked to his chair and sat down. His eyes looked unblinkingly at Baley, shrunken a bit by the concave lenses in his spectacles. He said, "Not everyone is that tolerant about differences in culture. Either among us or among the Spacers."

"All right. So what?"

"Three days ago, a Spacer died."

Now it was coming. The corners of Baley's thin lips tightened a trifle, but the effect upon his

long, sad face was unnoticeable. He said, "Too bad. Something contagious, I hope. A virus. A cold, perhaps."

The Commissioner looked startled. "What are you talking about?"

Baley didn't care to explain. The efficiency with which the Spacers had bred disease out of their societies was well known. The care with which they avoided contact with disease-riddled Earthmen, as far as possible, was even better known. But, then, sarcasm was lost on the Commissioner.

"I'm just talking," Baley said. "What did he die of?" He turned back to the window.

The Commissioner said, "He died of a missing chest. Someone had used a blaster on him."

**B**ALEY'S back grew rigid. He asked, without turning, "What are you talking about?"

"You're a plainclothesman. You know what murder is."

Baley abruptly turned. "But a Spacer! Three days ago?"

"Yes."

"Who did it? How?"

"The Spacers say it was an Earthman."

"It can't be."

"Why not? You don't like the Spacers. I don't. Who on Earth does? Someone didn't like them a little too much, that's all."

"Sure, but—"

"There was the fire at the Los Angeles factories. There was the Berlin R-smashing. There were the riots in Shanghai."

"Well?"

"It all points to rising discontent. Maybe to some sort of organization."

Baley said, "Commissioner, I don't get this. Are you testing me for some reason?"

The Commissioner looked honestly bewildered.

"Three days ago, a Spacer was murdered and the Spacers think the murderer is an Earthman. Till now, nothing's come out. Is that right? Commissioner, that's unbelievable. A thing like this would blow New York off the face of the planet if it really happened!"

The Commissioner shook his head. "It's not as simple as that. Look. Lije, I've been away three days. I've been in conference with the Mayor. I've been out to Spacetown. I've been down in Washington, talking to the Terrestrial Bureau of Investigation."

"Oh? And what do the Terries have to say?"

"They say it's our baby. Spacetown is under New York jurisdiction."

"But with extraterritorial rights."

"I know. I'm coming to that." The Commissioner's eyes fell

away from Baley's flinty stare. He seemed to regard himself as having been suddenly demoted to the position of Baley's underling, and Baley behaved as though he accepted the fact.

"The Spacers can run the show," said Baley.

"Wait a minute, Lije," pleaded the Commissioner. "Don't rush me. I'm trying to talk this over, friend to friend. I want you to know my position. I was there when the news broke. I had an appointment with him—with Roj Nemennuh Sarton."

"The victim?"

"That's right." The Commissioner groaned. "Five minutes more and I myself would have discovered the body. What a shock that would have been! As it was, it was brutal. Brutal! They met me and told me. It started a three-day nightmare, Lije. That on top of having everything blur on me and having no time to replace my glasses for days. *That* won't happen again, at least. I've ordered three pairs."

**L**IJE Baley considered the picture he conjured up of the event. He could see the tall, fair Spacers approaching the Commissioner with the news and breaking it to him in their unvarnished emotionless way. Julius would remove his glasses and polish them. Inevitably, under

the impact of the event, he would drop them, then look down at the broken remnants with a quiver of his soft, full lips. Baley was quite certain that for five minutes, anyway, the Commissioner was much more disturbed over his glasses than over the murder.

The Commissioner was saying, "It's a devil of a position. As you say, the Spacers have extraterritorial rights. They can insist on their own investigation, make whatever report they wish to their home governments. The Outer Worlds could use this as an excuse to pile on indemnity charges. You know how *that* would be taken by Earth."

"It would be political suicide if the President agreed to pay."

"And another kind of suicide not to."

"You don't have to draw me a diagram," said Baley. He had been a small boy when the gleaming cruisers from outer space sent down their soldiers into Washington, New York, Moscow, Paris, London and Canton to collect what they claimed was theirs.

"Then you see," the Commissioner said. "Pay or not pay, it means trouble. The only way out is to find the murderer and hand him over to the Spacers. It's up to us."

"Why not give it to the T.B.I. even if it is legally within our jurisdiction? There's the question

of interstellar relations—"

"The T.B.I. won't touch it. This is *hot* and it's in our lap." For a moment, he lifted his head and peered keenly at his subordinate. "And it's not good, Lije. Every one of us stands the chance of being out of a job."

"Replace all of us?" Baley demanded. "Yeast! The trained men to do it with don't exist."

"Robots," said the Commissioner. "They exist."

"What?"

"R. Sammy is just a beginning. He runs errands. Other robots can patrol the Expressways, control traffic—I hear it's been tried in other cities experimentally and it seems to work. There are robots that can do your work. Yes, and mine. Don't think we can't be declassified. And at our age, to wind up in the labor pool—"

Baley said gruffly, "All right!"

The Commissioner looked abashed. "Sorry, Lije."

Baley nodded and tried not to think of his father. The Commissioner knew the facts from his Service file, of course.

"You evidently think all this replacement business is threatening you and me," Baley said. "There's a limit to how far it can go."

**L**OOK, you're being naive, Lije: It's been getting worse and worse ever since the Spacers

came, twenty-five years ago. It's just beginning to reach higher, that's all. If we muff this case, it's a big, long step toward the point where we can stop looking forward to collecting our pension-tab booklets. On the other hand, Lije, if we handle the matter well, it can push the danger far into the future. And it would be a particular break for you."

"For me?" asked Baley.

"You'll be the operative in charge, Lije."

"I don't rate it, Commissioner. I'm only a C-5."

"You want a C-6 rating, don't you?"

Did he? Baley knew the privileges of a C-6. A seat on the Expressway in the rush hour, not just from ten to four. Higher up on the list-of-choice at the Section Kitchens. Maybe even a chance at a better apartment and a quota ticket to the Solarium levels for Jessie.

"I want it," he said. "Sure. But what would I get if I couldn't break the case?"

"Why wouldn't you break it, Lije?" wheedled the Commissioner. "You're a good man."

"But there are half a dozen men with higher ratings in my Department Section. Why should they be passed over?"

The Commissioner folded his hands. "Two reasons. You're not just another detective to me, Lije.

We're friends, too. I'm not forgetting we were in college together. Sometimes it may look as though I have forgotten, but that's the fault of rating. I'm Commissioner and you know what that means. But I'm still your friend and this is a tremendous chance for the right person. I want you to have it."

"That's one reason," said Bailey, without warmth.

"The second reason is that I need a favor."

"What sort of favor?"

"The Spacers agreed not to report the murder and to leave the investigation in our hands. In return, they insist that one of their own agents be in on the deal—the whole deal."

"It sounds like they don't trust us altogether."

"Surely you see their point. If this is mishandled, a number of them will be in trouble with their own governments. I'll give them the benefit of the doubt, Lije. I'm willing to believe they mean well."

"I'm sure they do, Commissioner. That's the trouble with them."

THE Commissioner looked blank at that, but went on, "Are you willing to take on a Spacer partner, Lije?"

"You're asking that as a favor?"

"Yes, I'm asking you to take the job with all the conditions the Spacers have set up."

"I'll take a Spacer partner, Commissioner."

"Thanks, Lije. He'll have to live with you."

"Oh, now, hold on!"

"I know, I know. But you've got a large apartment, Lije. Three rooms. Only one child. He'll be no trouble at all. And it's necessary."

"Jessie won't like it."

"You tell Jessie—" the Commissioner was so earnest that his eyes seemed to bore holes through the glass discs blocking his stare—"that if you do this for me, I'll do what I can to jump you a grade. C-7, Lije. C-7!"

"All right, Commissioner, it's a deal."

Bailey half-rose from his chair, caught the look on Enderby's face and sat down again.

"There's something else?"

Slowly, the Commissioner nodded. "One more item."

"Which is?"

"The name of your partner."

"What difference does that make?"

"The Spacers," said the Commissioner, "have peculiar ways. The partner they're supplying isn't—isn't—"

Bailey's eyes opened wide. "Just a minute!"

"You've got to, Lije. You've



got to. There's no way out."

"Stay at my apartment? A thing like that?"

"Like, I can't trust anyone else in this. Do I have to spell it out for you? We've got to work with the Spacers. We've got to succeed, if we're to keep the indemnity ships away from Earth. But we can't succeed just any old way. You'll be partnered with one of their Rs. If he breaks the case, if he can report that we're incompetent, we're ruined, anyway. We as a Department. You see that, don't you? So you've got a delicate job on your hands. You have to work with him, yet see to it that you solve the case and not he. Understand?"

"You mean cooperate with him one hundred per cent except that I cut his throat? Put him on the back with a knife in my hand?"

"What else can we do? There's no other way out."

Like Baley stood irresolute. "I don't know what Jessie will say."

"I'll talk to her, if you want me to."

"No, Commissioner." He drew a deep, sighing breath. "What's my partner's name?"

"R. Daneel Olivaw."

Baley said. "This isn't a time for euphemism, Commissioner. I'm taking the job, so let's use his full name. Robot Daneel Olivaw."

## CHAPTER II

THERE was the usual crowd on the Expressway; the standees on the lower level and those with seat-privileges above. A continuous trickle of humanity filtered off the Expressway, across the decelerating strips to localways or into the Stationaries that led under arches or over bridges into the endless mazes of the City Sections. Another trickle, just as continuous, worked inward from the other side, across the accelerating strips and onto the Expressway.

There were the infinite lights, the luminous walls and ceilings that seemed to drip cool, even phosphorescence; the flashing advertisements screaming for attention; the harsh, steady gleam of the "lightworms" that directed THIS WAY TO JERSEY SECTIONS. FOLLOW ARROWS TO EAST RIVER SHUTTLE. UPPER LEVEL FOR ALL WAYS TO LONG ISLAND SECTIONS.

Most of all, there was the noise that was inseparable from life. The sound of millions talking, laughing, coughing, calling, humming, breathing.

He stepped from strip to strip with the ease of a lifetime's practice. Children learned to "hop the strips" as soon as they learned to walk. Baley scarcely felt the jerk of acceleration as his velocity increased with each step. He was

not even aware that he leaned forward against the force. In thirty seconds, he had reached the final sixty-mile-an-hour strip and could step aboard the railed and glassed-in moving platform that was the Expressway.

No directions to Spacetown, he thought.

No need for directions. If you had business there, you knew the way. If you didn't know the way, you had no business there. When Spacetown was first established some twenty-five years earlier, there had been a strong tendency to make a showplace out of it. The hordes of the City herded in that direction.

The Spacers put a stop to that. Politely—they were always polite—but without any compromise with tact, they put up a force barrier between themselves and the City. They established a combination Immigration Service and Customs Inspection.

It gave rise to dissatisfaction, naturally. More dissatisfaction than it deserved. Baley remembered the Barrier Riots. He had been part of the mob that had suspended itself from the rails of the Expressways, crowded onto the seats in disregard of rating privileges, run recklessly along and across the strips at the risk of a broken body, and remained just outside the Spacetown Barrier for two days, shouting slogans

and destroying City property out of sheer frustration.

Baley could still sing the chants of the time if he put his mind to it. There was "Man was born on Mother Earth, do you hear?" to an old folk-tune called "Hinky-dinky-parley-voo."

Man was born on Mother Earth,  
do you hear?

Earth's the world that gave him  
birth, do you hear?

Spacer, get you off the face  
Of Mother Earth and into space.  
Dirty Spacer, do you hear?"

THERE were hundreds of verses. A few were witty, most were stupid, many were obscene. Every one, however, ended with "Dirty Spacer, do you hear?" Dirty, dirty. It was the futile throwing back at the Spacers their most keenly felt insult—their insistence on considering the natives of Earth as disgustingly diseased.

The Spacers didn't leave, of course. Earth's outmoded fleet had long since learned that it was suicide to challenge any Outer World ship. Earth planes had angrily ventured over Spacetown in the very early days of its establishment and simply disappeared. Only a shredded wing-tip or two had tumbled down to the ground.

And no mob could be so mad-

dened as to forget the effect of the portable sub-etheric disruptors used on Earthmen in those days.

So the Spacers sat behind their Barrier, which itself was the product of their own advanced science, and which no method known on Earth could duplicate or break. They just waited stolidly on the other side of the Barrier until the City quieted the mob with somno-vapor and retch-gas. The below-level penitentiaries rattled afterward with ringleaders, malcontents, and people who had been picked up only because they were nearest at hand. They were all set free before long.

After a proper interval, the Spacers eased their restrictions. The Barrier was removed and the City Police entrusted with maintaining Spacetown's arrogant, threatening isolation.

Now, thought Baley, things might take a reverse trend. If the Spacers seriously thought that an Earthman had entered Spacetown and committed murder, the Barrier might go up again. It would be bad, he thought, knowing just how grotesque an understatement that was.

He lifted himself onto the Expressway platform, made his way through the standees to the tight spiral ramp that led to the upper level, and sat down. He didn't

put his rating ticket in his hat-band till they passed the last of the Hudson sections. A C-5 had no seat rights east of the Hudson and west of Long Island, and although there was ample seating available, one of the Way guards would have automatically ousted him. People were increasingly petty about rating privileges and, in all honesty, Baley lumped himself in with "people."

THE air made the characteristic whistling noise as it frictioned off the curved windshields set above the back of every seat. It made talking a chore, but was no bar to thinking when you were used to it.

Baley's thinking was interrupted by a female shriek. A woman had dropped her handbag; he saw it for an instant, a pastel pink blob against the dull gray of the strips. A corner of Baley's mouth quirked. She might catch up with it, if she were clever enough and if passengers did not accidentally kick it this way and that. He would never know whether she did or not. The scene was already half a mile to the rear.

Chances were she wouldn't. He knew the statistics—an article was dropped on the strips somewhere in the City every three minutes and only one out of seventeen was recovered. The

Lost and Found Department was among the biggest bureaus in the City. It was just one more complication of modern life.

It was simpler once, Baley thought. That was what made Medievalists. Most Earthmen were Medievalists in one way or another. It was an easy thing to be when it meant looking back to a time when Earth was the world and not just one of fifty. The misfit one of fifty at that.

Medievalism took different forms. To the unimaginative Julius Enderby, it meant the adoption of anachronisms—spectacles, windows.

To Baley, it was the study of history, particularly the history of folkways.

The City now—New York City, in which he lived and had his being. Larger than any City but Los Angeles. More populous than any but Shanghai. It was only three centuries old.

To be sure, something had existed in the same geographic area before then that had been called New York City. That primitive gathering of population had existed for three thousand years, not three hundred, but it hadn't been a City.

There were no Cities then, just huddles of dwellings large and small, open to the air. They were something like the Space Domes, only much different, of course.

These huddles—the largest barely reached ten million in population and most were under a million—were scattered all over Earth by the thousands. By modern standards, they had been completely inefficient economically.

**E**FFICIENCY had been forced on Earth with increasing population. Two billion people, three billion, even five billion could be supported by the planet by progressive lowering of the standard of living. When the population reaches eight billion, however, semi-starvation becomes the norm. A radical change had to take place in Man's culture, particularly when it turned out that the Outer Worlds (which had merely been Earth's colonies a thousand years before) were serious about their immigration restrictions.

The radical change had been the gradual formation of the Cities over a thousand years of Earth's history. Efficiency implied bigness. Even in Medieval times, that had been realized, perhaps unconsciously. Home industry gave way to factories, and factories to continental industries.

Think of the inefficiency of a hundred thousand houses for a hundred thousand families as compared with a hundred-thousand-unit Section; a book-film collection in each house, as com-

pared with a Section film-concentrate; independent video for each family as compared with video-piping systems.

For that matter, take the simple folly of endless duplication of kitchens and bathrooms as compared with the thoroughly efficient diners and shower rooms made possible by City culture.

More and more, the villages, towns and "cities" of Earth died and were swallowed by the Cities. Even the early prospects of atomic war only slowed the trend.

City culture meant optimum distribution of food, increasing utilization of yeasts and hydroponics. New York City spread over two thousand square miles and at the last census, its population was well over twenty million. There were some eight hundred cities on Earth with an average population of ten million.

Each City became a semi-autonomous unit, economically all but self-sufficient. It could roof itself in, gird itself about, burrow itself under. It became a cave, a tremendous, self-contained cave of steel and concrete.

It could lay itself out scientifically. At the center was the enormous complex of administrative offices. In careful orientation to one another and to the whole were the large residential Sections connected and interlaced by the Expressway and the Local-

ways. Toward the outskirts were the factories, the hydroponic plants, the yeast-culture vats, the power plants. Through all this ran the water-pipes and sewage-ducts, schools, prisons and shops, power lines and communication-beams.

No doubt about it, the City was the culmination of Man's mastery over the environment. Not space-travel, not the fifty colonized worlds that were now so haughtily independent, but the City.

**P**RACTICALLY none of Earth's population lived outside the Cities. Outside was the wilderness, the open sky that few men could face with anything like equanimity. To be sure, the open space was necessary. It held the water that men must have, the coal and the wood that were the ultimate raw materials for plastics and for the eternally growing yeast. (Petroleum had long vanished, but oil-rich-strains of yeast were an adequate substitute.) The land between the Cities still held the mines, and was still used to a larger extent than most men realized for growing food and grazing stock. It was inefficient, but beef, pork and grain always found a luxury market and could be used for export purposes.

But few humans were required

to run the mines and ranches, to exploit the farms and pipe the water, and these supervised at long distance. Robots did the work better and required less.

Robots. That was the one huge irony. It was on Earth that the positronic brain had been invented and on Earth that robots had first been put to productive use. *Not* on the Outer Worlds, though the Outer Worlds always acted as if robots had been born of their culture.

In a way, of course, the culmination of robot economy had taken place on the Outer Worlds. Here on Earth, robots had always been restricted to the mines and farmlands. Only in the last quarter-century, under the urgings of the Spacers, had robots filtered their slow way into the Cities.

The Cities were good. Everyone but the Medievalists knew that they had no reasonable substitute. The only trouble was that they wouldn't stay good. Earth's population was still rising. Some day, with all that the Cities could do, the available calories per person would simply fall below basic subsistence level.

It was all the worse because of the existence of the Spacers, the descendants of the early emigrants from Earth, living in luxury on their underpopulated robot-ridden worlds out in space. They were coolly determined to

keep the comfort that grew out of the emptiness of their worlds, and for that purpose they kept their birth-rate down and immigrants from teeming Earth out. And this—

A nudge at Baley's unconscious warned him that he was approaching the Newark Section. If he stayed where he was much longer, he'd find himself speeding southwestward to the Trenton Section turning of the Way, through the heart of the warm and musty-odored yeast country.

It was a matter of timing—so long to shinny down the steps, so long to squirm through the grunting standees, so long to slip along the railing and out an opening, so long to hop across the decelerating strips.

When he was done, he was precisely at the off-shooting of the proper Stationary. At no time did he time his steps consciously. If he had, he would probably have missed.

**B**ALEY found himself in unusual semi-isolation. Only a policeman was with him inside the Stationary and, except for the unnoticed whirring of the Expressway, there was an almost uncomfortable silence.

The policeman approached, and Baley flashed his badge impatiently. The policeman lifted his hand in permission to pass on.

The passage narrowed and curved sharply three or four times. That was obviously deliberate. Mobs of Earthmen couldn't gather in it and direct charges were impossible.

A Spacer was standing at the point where a series of doors marked the openings to the open air and the domes of Spacetown. He was dressed in Earth fashion, trousers tight at the waist, loose at the ankle and color-striped down the seam of each leg. He wore an ordinary Textron shirt, open collar, seam-zipped and ruffled at the wrist, but the way he stood, the way he held his head, the calm and unemotional lines of his broad, high-cheek-boned face, the careful set of his short, bronze hair lying flatly backward and without a part marked him as a Spacer.

Baley approached and said in a monotone, "I am Plainclothesman Elijah Baley, Police Department, City of New York, Rating C-5." He showed his credentials. "I have been instructed to meet R. Daneel Olivaw at Spacetown Approachway." He looked at his watch. "I am a little early. May I request the announcement of my presence?"

The Spacer, who had listened politely, said, "It will not be necessary. I have been waiting for you."

Baley's hand went up auto-

matically, then dropped. So did his long chin. He didn't quite manage to say anything. The words froze.

The Spacer said, "I shall introduce myself. I am R. Daneel Olivaw."

"Yes? Am I making a mistake? I thought the first initial—"

"Quite so. I am a robot."

PUTTING a damp hand to his hair, Baley smoothed it back unnecessarily. Then he held the hand out. "I'm sorry, Mr. Olivaw. I don't know what I was thinking of. I am Elijah Baley, your partner."

The robot's hand closed on his with a smoothly increasing pressure that reached a comfortably friendly peak, then declined. "I seem to detect disturbance. May I ask that you be frank with me? It is best to have as many relevant facts as possible in a relationship such as ours. And it is customary on my world for partners to call one another by the familiar name. I trust that that is not counter to your own customs."

"It's just that you don't look like a robot," said Baley desperately.

"And that disturbs you?"

"It shouldn't. I suppose, Daneel. Are they all like you on your world?"

"There are individual differ-

ences, Elijah, as with men."

"Our own robots— Well, you can tell they're robots. You look like a Spacer."

"Oh, I see. You expected a rather crude model and were surprised. Yet it is only logical that our people should use a robot of pronounced humanoid characteristics in this case if we expected to avoid unpleasantness. Is that not so?"

It was certainly so. An undisguised robot roaming the City would be in quick trouble.

Baley said, "Yes."

"Then let us leave now, Elijah."

They made their way back to the Expressway. Robot Daneel caught the purpose of the accelerating strips and maneuvered along them with a quick proficiency. Baley, who had begun by moderating his speed, ended by hastening it in annoyance. He reached the endless cars of Expressway and scrambled aboard with what amounted to outright recklessness. The robot followed easily.

Baley was red. He swallowed twice and said, "I'll stay down here with you."

"Down here?" The robot, apparently oblivious to both the noise and the rhythmic swaying of the platform, said, "Is my information wrong? I was told that a rating of C-5 entitled one to a

seat on the upper level under certain conditions."

"You're right. I can go up there, but you won't know where to get off if I'm not with you."

"Why can I not go up with you?"

"It takes a C-5, Daneel."

Talking was difficult. The hiss of frictioning air was louder on the less-shielded lower level and Baley was understandably anxious to keep his voice low.

R. Daneel said, "Why should I not be a C-5? I am your partner and, consequently, of equal rank. I was given this."

From an inner shirt pocket he produced a rectangular credential card, quite genuine. The name given was Daneel Olivaw, without the all-important initial. The rating was C-5.

"Come on up," said Baley woodenly.

Seated, Baley looked straight ahead, angry with himself, very conscious of the robot sitting next to him. He had been caught twice. He had not recognized R. Daneel as a robot; he had not guessed the logic that demanded R. Daneel be given C-5 rating.

The trouble was, of course, that he was not the plainclothesman of popular myth. He was not incapable of surprise, imperturbable of appearance, infinite of adaptability, and lightning of mental grasp. He had never sup-



posed he was, but he had never regretted the lack before.

What made him regret it was that, to all appearances, R. Daneel Olivaw was that very myth embodied.

He had to be. He was a robot.

Baley began to find excuses for himself. He was accustomed to the robots like R. Sammy at the office. He had expected a creature with a skin of hard and glossy plastic, nearly dead white in color. He had expected an expression fixed at an unreal level of inane good humor. He had expected jerky, faintly uncertain motions.

R. Daneel was none of that.

Baley risked a quick side-glance at the robot. R. Daneel turned simultaneously to meet his eye and nod gravely. His lips had moved naturally when he had spoken and did not simply remain parted as those of Earth robots did. There had been glimpses of an articulating tongue.

Baley thought: Why does he have to sit there so calmly? This must be something completely new to him—noise, lights, crowds.

Baley got up, brushed past R. Daneel and said, "Follow me."

Off the Expressway, down the decelerating strips.

Baley thought: Good Lord, what do I tell Jessie, anyway?

The coming of the robot had

rattled that thought out of his head, but it was coming back with sickening urgency, now that they were heading down the Localway that led into the Lower Bronx Section.

He said, "This is all one building, you know. Daneel; everything you see, the whole City. Twenty million people live in it. The Expressways go continuously, night and day, at sixty miles an hour. There are nine hundred and fifty miles of it altogether and thousands of miles of Localways."

Any minute now, Baley thought, I'll be figuring out how many tons of yeast-product New York eats per day and how many cubic feet of water we drink and how many megawatts of power the atomic piles deliver per hour.

Daneel said, "I was informed of this and other similar data in my briefing."

Baley thought: Well, that covers the food, drink, and power situation, too, I suppose. Why try to impress a robot?

**THEY** were at East 182nd Street and, in not more than two hundred yards, they would be at the elevator banks that fed those steel and concrete layers of apartments that included his own.

He was on the point of saying, "This way," when he was stopped by a knot of people gathering

outside the brilliantly lighted force-door of one of the many retail departments that lined the ground levels solidly in this Section.

He asked of the nearest in an automatic tone of authority, "What's going on?"

The man he addressed, who was standing on tiptoe, said, "Damned if I know. I just got here."

Someone else said excitedly, "They got those lousy Rs in there. I think maybe they'll throw them out here. Boy, I'd like to take them apart."

Baley looked nervously at Daneel, but if the latter caught the significance of the words or even heard them, he did not show it.

Baley plunged into the crowd. "Let me through. Police!"

They made way. Baley caught words behind him.

"—take them apart nut by nut, split them down the seams slow-like—" And someone else laughed.

Baley turned a little cold. The City was the acme of efficiency, but it made demands of its inhabitants. It asked them to live in a tight routine and order their lives under a strict and scientific control. Occasionally, built-up inhibitions exploded.

He remembered the Barrier riots.

Reasons for anti-robot rioting certainly existed. Men who found themselves faced with the prospect of declassification, after half a lifetime of effort, could not decide cold-bloodedly that individual robots were not to blame. Individual robots could at least be struck at.

One could not strike at something called "governmental policy" or at a slogan like "Higher production with robot labor."

The government called it growing pains. It shook its collective head sorrowfully and assured everyone that, after a necessary period of adjustment, a new and better life would exist for all.

But the Medievalist movement expanded along with the declassification process. Men grew frightened and the border between bitter frustration and wild destruction is sometimes easily crossed.

At this moment, minutes could be separating the hostility of the crowd from a flashing orgy of blood and smash.

Baley writhed his way desperately to the force-door.

### CHAPTER III

THE interior of the store was temptier than the street outside. The manager, with commendable foresight had thrown the force-door early in the game,

preventing potential troublemakers from entering. It also kept the principals in the argument from leaving, but that was minor.

Baley got through the force-door by using his official neutralizer. Unexpectedly, he found R. Daneel still behind him. The robot was pocketing a neutralizer of his own—a slim one, smaller and neater than the standard police model.

The manager ran to them instantly, talking loudly. "Officers, my clerks have been assigned me by the City. I am perfectly within my rights."

There were three robots standing rodlike at the rear of the department. Six humans were standing near the force-door. They were all women.

"All right now," said Baley crisply. "What's going on? What's all the fuss about?"

One of the women said shrilly, "I came in for shoes. Why can't I have a human clerk? Ain't I respectable?"

The manager said, "I'll wait on her myself if I have to, but I can't wait on all of them, Officer. There's nothing wrong with my men. They're registered clerks. I have their spec charts and guarantee slips—"

"Spec charts!" screamed the woman, turning to the rest. "He calls them men! They ain't men. They're ro—bots!" She stretched

out the syllables. "And I tell you what they do, in case you don't know. They steal jobs from men."

A voice sounded from the other side of the force-door, queerly deadened and distorted by the effects of the barrier of inertia, but with anger still clearly audible. "My job! My job they took!"

A figure shoved furiously through the crowd. The face was pale in the corridor lights; arms waved wildly. "I was ten years on that job. Now my kids ain't got enough to eat. Why? Why? I should've been born a robot. The Government takes care of them all right!"

The crowd roared.

**B**ALEY was brutally conscious of R. Daneel Olivaw standing at his elbow. He looked at the clerks. They were Earth-made, and even on that scale, relatively inexpensive models.

They were just robots made to know such simple things as all the style numbers, their prices, the sizes available in each. They could keep track of inventory better than humans could since they would have no outside interests. They could compute the proper orders for the next week. They could measure the customer's foot.

In themselves, harmless. As a group, incredibly dangerous.

Baley could sympathize with the woman more deeply than he would have believed possible two hours before. Wondering if R. Daned could not replace an ordinary Plainclothesman C-5, he could see the barracks, could taste the yeast-mush, and he could remember his father.

His father had been a nuclear physicist, with a rating that had put him in the top percentile of the City. There had been an accident at the power plant and his father had borne the blame. He had been declassified. Baley did not know the details; it had happened when he was a year old.

But he remembered the barracks of his childhood, the grinding communal existence just this side of the edge of bearability. He remembered his mother not at all; she had not survived long. His father he recalled well, a sodden man, morose and lost, speaking sometimes of the past in a hoarse, broken whisper.

His father died, still declassified, when Baley was eight. Young Baley and his two older sisters moved into the Section orphanage. Children's Level, they called it. His mother's brother, whom Baley thought of always as "Uncle Boris," was himself too poor to prevent that.

So it continued hard. And it was hard going through school, with no father-derived status-

privileges to smooth the way.

And now he had to stand in the middle of a growing riot and pacify or intimidate men and women who, after all, only feared declassification for themselves and those they loved, as he himself did.

**T**ONELESSLY, he said to the woman who had spoken. "Let's not have any trouble, lady. The clerks aren't doing you any harm."

"Sure they ain't done me no harm," snapped the woman. "They ain't gonna, either. Think I'll let their cold, greasy fingers touch me? I came in here expecting to get treated like a human being. I got a right to have human beings wait on me. And, listen, I got two kids waiting for supper. They can't go to the Section Kitchen without me like they were orphans. I gotta get out of here."

"If you had let yourself be waited on, you'd have been out of here by now. You're just making trouble for nothing."

"Well!" The woman registered shock. "Maybe you think you can talk to me like I was dirt. Maybe it's time the Government realized robots ain't the only things on Earth. I'm a hard-working woman and I've got rights."

Baley could feel the situation

get out of hand. Even if the woman would consent to be waited on, the waiting crowd was ugly enough for anything. There must be a hundred crammed outside the display window now.

"What is the usual procedure in such a case?" asked R. Daneel Olivaw suddenly.

Baley nearly jumped. He said, "This is an unusual case in the first place."

"What is the law?"

"The Rs have been duly assigned here. They're registered clerks. There's nothing illegal about that."

"In that case," said R. Daneel, "order the woman to let herself be waited on or to leave."

"It's a mob we have to deal with, not a woman. There's nothing to do but call a riot squad."

"It should not be necessary for citizens to require more than one officer of the law to direct what should be done," said Daneel. He turned his broad face to the store manager. "Open the force-door, sir."

Baley's arm shot forward to seize R. Daneel's shoulder, swing him about. He arrested the motion. If, at this moment, two lawmen quarreled openly, it would mean the end of all chance for a peaceful solution.

The manager protested, looked at Baley. Baley did not meet his eye.



R. Daneel said, unmoved, "I order you with the authority of the Law."

The manager bleated, "I'll hold the City responsible for any damage to the goods or fixtures. I serve notice that I'm doing this under orders."

**T**HE barrier went down; men and women crowded in. There was a happy roar to them. They sensed victory.

Baley had seen robots being lifted by a dozen hands, their heavy unresisting bodies carried backward from straining arm to straining arm. Men yanked and twisted at the metal mimicry of men. They used hammers, force-knives, needle-guns, and finally reduced the miserable objects to shredded metal and wire. Expensive positronic brains, the most intricate creation of the human mind, were thrown from hand to hand like footballs and mashed to uselessness in a trifle of time.

Then, with the genius of destruction so merrily let loose, the mobs turned on anything else that could be taken apart.

The robot clerks could have no knowledge of any of this, so they stood smilingly ready to sell shoes as the crowd flooded inward. The woman who had started the fuss, frightened at seeing it grow so suddenly, gasped, "Here, now. Here, now."

The manager was shrieking, "Stop them, Officer! Stop them!"

R. Daneel spoke. Without apparent effort, his voice was suddenly decibels higher than a human's voice had a right to be. Of course, thought Baley for the tenth time, he's not—

R. Daneel said, "The next man who moves will be shot."

Someone well in the back yelled, "Get him!"

But for a moment, no one moved.

R. Daneel stepped nimbly upon a chair and from that to the top of a Transtex display case. The colored fluorescence gleaming through the slits of polarized molecular film turned his cool, smooth face into something unearthly.

Unearthly, thought Baley.

R. Daneel said crisply, "You are saying, 'This man is holding a neuronc whip, or a tickler. If we all rush forward, we will bear him down and at most one or two of us will be hurt and even they will recover. Meanwhile, we will do just as we wish and to space with law and order.' " His voice was neither harsh nor angry, but it carried authority. "You are mistaken. What I hold is not a neuronc whip, nor is it a tickler. It is a blaster and very deadly. I will kill many of you before you seize me—perhaps most of you."

There was motion at the out-

skirts, but the crowd no longer grew. Those nearest R. Daneel were holding their breath, trying desperately to resist the mass pressure of those behind them.

The woman with the hat broke the spell. "He's gonna kill us! I ain't done nothing! Oh, lemme outta here!"

She turned, but faced an immovable wall of crammed men and women.

**R.** DANEEL jumped down from the display counter and said, "I will now walk to the door. I will shoot the man or woman who touches me. When I reach the door, I will shoot any man or woman who is not moving about his business. This woman here—"

"No, no!" yelled the woman with the hat. "I tell you I didn't do anything. I didn't mean any harm. I don't want any shoes. I just want to go home."

"This woman here," went on Daneel, "will remain. She will be waited on."

He stepped forward.

The mob faced him dumbly. Baley closed his eyes. It wasn't his fault, he thought desperately. There'll be murder done and the worst mess in the world, but they forced a robot on me as partner. They gave him equal status.

He didn't believe the excuse

himself. He might have stopped R. Daneel at the start. He might have put in the call for a squad-car. He had let R. Daneel take responsibility, instead, and had felt a cowardly relief at it. When he tried to tell himself that R. Daneel's personality simply dominated the situation, he was filled with a sudden self-loathing. A robot dominating a situation!

He was aware of no unusual noise, no shouting and cursing, no groans, no yells. His eyes sprang open.

Jehoshaphat, they were dispersing!

The manager of the store was cooling down, adjusting his twisted jacket, smoothing his hair, muttering angry threats at the vanishing crowd. One of the robot clerks advanced on the cowering woman with the hat and removed a shoe deftly. The robot's eye regarded it dispassionately for half a moment, then called out, "Size 6½-C, last 14-X Alcove D-second shelf." A second clerk was already on the way to the indicated section.

The smooth, fading whistle of a squad-car came to a halt just outside. Baley thought: Sure, when it's all over.

The manager plucked his sleeve. "Let's have no more trouble, Officer."

Baley said, "There won't be any trouble."

It was easy to get rid of the squad-car. They had come in response to reports of a crowd in the street. They knew no details and could only see for themselves that the street was clear. R. Daneel stepped aside and showed no sign of interest as Baley explained to the men in the squad-car, minimizing the event and completely burying R. Daneel's part in it.

**A**FTER the car left he pulled R. Daneel to one side, against the steel and concrete of one of the building shafts.

"Listen," he said, "I'm not trying to steal your show, you understand."

"Steal my show? Is that one of your Earth idioms?"

"I didn't report your part in this."

"I do not know all your customs. On my world, a complete report is usual, but perhaps it is not so on your world. In any case, civil rebellion was averted. That is the important thing, is it not?"

"Is it? Now you look here." Baley tried to sound forceful. "Don't you ever do it again."

"Never again insist on the observance of law? If I am not to do that, what then is my purpose?"

"Don't ever threaten a human being with a blaster again."

"I would not have fired under any circumstances, Elijah, as you know very well. I am incapable of hurting a human. But, as you see, I did not have to fire. I did not expect to have to."

"That was pure luck, not having to fire. Don't take that kind of chance again. I could have pulled that grandstand stunt—"

"Grandstand stunt? What is that?"

"I could have pulled a blaster on the crowd myself. I had the blaster to do it with. But it isn't the kind of gamble I am justified in taking, or you, either. It was safer to call squad-cars to the scene than to try one-man heroics."

R. Daneel considered. He shook his head. "I think you are wrong, partner Elijah. My briefing includes the information that, unlike the men of the Outer Worlds, Earthmen are trained from birth to accept authority. One man, representing authority firmly enough, was quite sufficient, as I proved. Your own desire for a squad-car was only an expression of your wish for superior authority to take responsibility out of your hands. On my own world, I admit that what I did would have been most unjustified."

Baley's long face was red with anger. "If they had recognized you as a robot—"



"I was sure they wouldn't."

"In any case, remember that you are a robot. Just a robot. Like those clerks in the shoe store."

"But this is obvious."

"And you're not human." Baley felt himself being driven into a wild cruelty almost against his will.

"The division between human and robot is perhaps not as significant as that between intelligence and non-intelligence."

"Maybe on your world, but not on Earth." Baley looked at his watch and shook his head angrily. He was an hour and a quarter late. He said curtly, "Let's go now. I've got to get you home."

"You see, it is not proper to make any distinction of lesser meaning than the fact of intelli—"

Baley's voice rose. "All right! The subject is closed. Jessie is waiting for us." He walked in the direction of the nearest intra-section communi-tube. "I'd better call and tell her we're on our way up."

"Jessie?"

"My wife."

Jehoshaphat, thought Baley. I'm in a fine mood to face Jessie.

## CHAPTER IV

IT had been her name that had first made Elijah Baley really conscious of Jessie. He had met

her at the Section Christmas party back in '02, over a bowl of punch. He had just finished his schooling, just taken his first job with the City, just moved into one of the bachelor alcoves of Common Room 122A.

She was handing out the punch. "I'm Jessie," she said. "Jessie Navodny. I don't know you."

"Baley," he said, "Like Baley. I'm new in the section."

He took his punch and smiled mechanically. She impressed him as a cheerful and friendly person, so he stayed near her, watching the folks come and go, and sipping thoughtfully.

"I helped make the punch." The girl's voice broke in upon him. "I can guarantee it. Do you want more?"

Baley realized his glass was empty. He smiled and nodded.

The girl's face was oval and not precisely pretty. Her dress was demure and conservative and she wore her light brown hair in a series of ringlets over her forehead.

She joined him in the next drink and he felt better.

"Jessie," he said, feeling the name with his tongue. "It's nice. Do you mind if I use it when I'm talking to you."

"If you want to. Do you know what it's short for?"

"Jessica?"

"You'll never guess."

"I can't think of anything else."

She laughed and said archly, "My full name is Jezebel."

That was when his interest flared. He put his punch glass down and said intently, "No, really?"

"I'm not kidding, Jezebel. It's my real-for-true name on all my records. My parents liked the sound of it."

She was quite proud of it, even though there was never a less likely Jezebel.

Baley said seriously, "My name is Elijah, you know. My full name, I mean."

It didn't register with her.

He said, "Elijah was Jezebel's great enemy."

"He was?"

"Why, sure. In the Bible."

"Oh? I didn't know that. Now isn't that funny? I hope that doesn't mean you'll have to be my enemy in real life."

**F**ROM the very beginning, there was no question of that. It was the coincidence of names at first that made her more than just a pleasant girl at the punch-bowl. But afterward he had grown to find her cheerful, tender-hearted and finally, by some queer alchemy of the spirit, even pretty. He appreciated her cheerfulness particularly. His own sardonic view of life needed the

antidote of cheerfulness.

But Jessie never seemed to mind his long grave face.

"Oh, goodness," she said, "what if you do look like a sour lemon? I know you're not really, and I guess if you were always grinning away like clockwork, the way I do, we'd just explode when we got together. You stay the way you are, Lije, and keep me from floating away."

And she kept Lije Baley from sinking down. He applied for a small Couples apartment and got a contingent admission pending marriage. He showed it to her and said, "Will you fix it so I can get out of Bachelor's, Jessie? I don't like it there."

Maybe it wasn't the most romantic proposal in the world, but Jessie said yes.

Baley could only remember one time when Jessie's habitual cheer deserted her completely and that, too, had involved her name. It was in their first year of marriage—in fact the very month in which Bentley was conceived. (Their I.Q. rating, Genetic Values status, and Baley's position in the Department entitled him to two children, of which the first might be conceived during the first year.) Maybe, as Baley thought back upon it, that might have had something to do with it.

Jessie had been drooping a bit because of Baley's consistent ov-

ertime hours of work.

She said, "It's embarrassing to eat alone at the Kitchen every night."

Baley was out of sorts. He said, "Why should it be? You can meet some nice single fellows there."

And of course she promptly fired up. "You think I can't make an impression on them?"

Maybe it was just because he was tired; maybe because Julius Enderby, a classmate of his, had moved up another notch on the C-scale rating while he himself had not. Maybe it was simply because he was a little tired of having her try to act up to the name she bore when she was nothing of the sort and never could be.

In any case, he said bitingly, "I suppose you can, but I don't think you'll try. I wish you'd forget your name and be yourself."

"I'll be just what I please."

"Trying to be Jezebel won't get you anywhere. If you must know the truth, the name doesn't mean what you think, anyway. The Jezebel of the Bible was a faithful wife."

JESSIE stared angrily at him. "That isn't so. I've heard the phrase, 'a painted Jezebel.' I know what that means."

"Maybe you think you do, but you're wrong. After Jezebel's hus-

band, King Ahab, died, her son Jehoram became king. One of the captains of his army, Jehu, rebelled against him and assassinated him. Jehu then rode to Jezreel where the old queen-mother, Jezebel, was residing. Jezebel knew that he meant to kill her. In her pride and courage, she painted her face and dressed herself in her best clothes so that she could meet him as a haughty and defiant queen. He had her thrown from the window of the palace and killed, but she made a good end according to my notions. And that's what people refer to when they speak of a 'painted Jezebel,' whether they know it or not."

The next evening Jessie said in a small voice, "I've been reading the Bible, Lije."

"What?" For a moment, Baley was bewildered.

"The parts about Jezebel."

"Oh! Jessie, I'm sorry if I hurt your feelings. I was being childish."

"No. No." She pushed her hand from her waist and sat on the couch, cool and upright, with a definite space between them. "It's good to know the truth. I don't want to be fooled by not knowing. So I read about her. She was a wicked woman, Lije."

"Well, her enemies wrote those chapters. We don't know her side."

"She killed all the prophets of the Lord that she could lay her hands on."

"So they say," Baley felt about for a stick of chewing gum. He later abandoned that habit because Jessie said that with his long face and sad, brown eyes, it made him look like an old cow stuck with an unpleasant wad of grass it couldn't swallow and wouldn't spit out.

He said, "If you want her side, I could think of some arguments for you. She followed the religion of her ancestors who had been in the land long before the Hebrews came. The Hebrews had their own God and, what's more, he was a jealous God. It wasn't enough for them to worship Him; everyone else had to worship Him as well.

"Jezebel was a conservative, defending the old beliefs against the new ones. After all, even if the new beliefs had higher moral values, the old ones were more satisfying emotionally. The fact that she killed priests just marks her as a person of her times. It was the usual missionary method in those days. If you read 1 Kings, you must remember that Elijah (my namesake this time) had a contest with eight hundred and fifty prophets of Baal to see which could bring down fire from heaven. Elijah won and promptly ordered the crowd of

onlookers to kill the eight hundred and fifty Baalites. And they did."

SHE bit her lip. "What about Naboth's vineyard, Lije? Here was this Naboth not bothering anybody, except that he refused to sell the King his vineyard. So Jezebel arranged to have people perjure themselves and say that Naboth had committed blasphemy or something."

"He was supposed to have 'blasphemed God and the king,'" said Baley.

"Yes. So they confiscated his property after they executed him."

"That wasn't considered wrong then. In modern times, if the City or even if one of the Medieval nations had wanted Naboth's property, the courts would have ordered him off, had him removed by force if necessary, and paid him whatever they considered a fair price. King Ahab didn't have that kind of legal solution. He was sick and unhappy over the situation and Jezebel felt that her husband's welfare came ahead of Naboth's. I keep telling you, she was the model of a faithful wi—"

Jessie flung herself away from him. "I think you're mean and spiteful."

He looked at her with complete dismay. "What have I

done? What's the matter with you?"

She left the apartment without answering and spent the evening and half the night at the sub-etheric video levels, traveling petulantly from showing to showing and using up a two-month supply of her quota allowance (and her husband's).

When she came back to a still wakeful Lije Baley, she had nothing further to say to him.

It occurred to Baley later, much later, that he had smashed an important part of Jessie's life. Her name had signified something wicked and licentious to her. It was a delightful make-weight for her prim, respectable nature. It gave her an aroma of vice and she adored that.

But it was gone. She never mentioned her full name again, not to Lije, not to her friends and maybe, for all Baley knew, not even to herself. She was Jessie and took to signing her name so.

AS the days passed, she began speaking to him again and after a week or so, their relationship was on the old friendly footing and with all subsequent quarrels, nothing ever reached that one bad spot of intensity.

Only once was there even an indirect reference to the matter. It was in her eighth month of preg-

nancy. She had left her own position as dietitian's assistant in Section Kitchen A-23 and, with unaccustomed time on her hands, was amusing herself in speculation and preparation for the baby's birth.

She said, one evening, "What about Bentley?"

"Pardon me, dear?" said Baley, looking up from a sheaf of work he had brought home with him. (With an additional mouth to feed and Jessie's pay stopped and his own promotions to the non-clerical levels as far off, seemingly, as ever, extra work was necessary.)

"I mean if the baby's a boy, what about Bentley as a name?"

Baley pulled down the corners of his mouth. "Bentley Baley? Don't you think the names are too similar?"

"I don't know. It has a swing. I think. Besides, the child can always pick out a middle name to suit himself when he gets older."

"Well, it's all right with me."

"Are you sure? I mean—maybe you wanted him to be named Elijah."

"And be called Junior? I don't think that's a good idea. He can name his son Elijah, if he wants to."

Then Jessie said, "There's just one thing," and stopped.

After an interval, he looked up.

"What one thing?"

She was red and she did not quite meet his eye, but she said, forcefully enough, "Bentley isn't a Bible name, is it?"

"No," said Bailey, "I'm quite sure it isn't."

"All right, then. I don't want any Bible names."

And that was the only harking back that took place from that time to the day when Elijah Bailey was coming home with Robot Danec Olivaw, when he had been married for more than eighteen years and when his son Bentley Bailey (middle name still unchosen) was past sixteen.

**B**AILEY paused before the large double door on which there glowed in large letters: PERSONAL—MEN. In smaller letters were written: Subsections 1A—1E. In still smaller letters, just above the key-slit, it stated: "In Case of Loss of Key, Communicate at Once with 27-101-51."

A man inched past them, inserted an aluminum sliver into the key-slit and walked in. He closed the door behind him, making no attempt to hold it open for Bailey. Had he done so, Bailey would have been seriously offended. By custom, men disregarded one another's presence entirely either within or just outside the Personals.

One of the more interesting postmarital confidences was Jessie's telling him that the situation was quite different at Women's Personals. It was one of the penalties of civic advancement that when the Baileys were granted permission for a small washbowl in their bedroom, Jessie's social life suffered.

Bailey said, without completely masking his embarrassment, "Please wait out here, Danecel."

"Do you intend washing?" asked R. Danecel.

Bailey squirmed and thought: Damned robot! If they were briefing him on everything under steel, why didn't they teach him manners? I'll be responsible if he ever says anything like this to anyone else.

He said, "I'll shower. It gets crowded evenings. I'll lose time then. If I get it done now, we'll have the whole evening before us."

R. Danecel's face maintained its repose. "Is it part of the social custom that I wait outside?"

Bailey's embarrassment deepened. "Why need you go in for— for no purpose?"

"Oh, I understand you. Yes, of course. Nevertheless, Elijah, my hands grow dirty, too, and I will wash them."

He indicated his palms, holding them out before him. They were pink and plump, with the proper

creases. They bore every mark of excellent and meticulous workmanship and were as clean as need be.

Baley said, "We have a wash-basin in the apartment, you know." He said it casually. Snobbery would be lost on a robot.

"Thank you for your kindness. On the whole, however, I think it would be preferable to make use of this place. If I am to live with you men of Earth, it is best that I adopt as many of your customs and attitudes as I can."

"Come on in, then."

The bright cheerfulness of the interior was a sharp contrast to the busy utilitarianism of most of the rest of the City, but it was all a blank on Baley's saturated retina.

He whispered to Daneel, "I may take half an hour or so. Wait for me." He started away, then returned to add, "And don't talk to anybody and don't look at anybody. It's a custom."

He looked hurriedly about to make certain that his own small conversation had not been noted, was not being met by secret shocked glances. Nobody, fortunately was in the ante-corridor, and after all, it was only the ante-corridor.

HE hurried past the common chambers to the private stalls. It had been five years now

since he had been awarded one—large enough to contain a shower, a small laundry and other necessities. It even had a small projector that could be keyed in for the news films.

"A home away from home," he had joked when it was first made available to him. But now he often wondered how he would ever bear the adjustment back to the more Spartan existence of the common chambers if his stall-privileges were ever canceled.

He pressed the button that activated the laundry and the smooth face of the meter lighted.

R. Daneel was waiting patiently when Baley returned with a scrubbed body, clean underwear, a freshened shirt and, generally, a feeling of greater comfort.

"No trouble?" Baley asked, when they were well outside the door and able to talk.

"None at all, Elijah," said R. Daneel.

Jessie was at the door, smiling nervously, when they arrived. Baley kissed her.

"Jessie," he mumbled, "this is my new partner, Daneel Olivaw."

Jessie held out a hand, which R. Daneel took and released. She turned to her husband, then looked timidly at R. Daneel.

She said, "Won't you sit down, Mr. Olivaw? I must talk to my husband about some family matters. It'll take just a minute. I

hope you won't mind."

Her hand was on Baley's sleeve. He followed her into the next room.

She said, in a hurried whisper, "You aren't hurt, are you? I've been so worried ever since the broadcast."

"What broadcast?"

"About the riot at the shoe counter. They said two plain-clothesmen stopped it. I knew you were coming home with a partner and this was right in our sub-section and just when you were coming home and I thought they were making it sound better than it was and you were—"

"Please, Jessie. You see I'm perfectly all right."

Jessie caught hold of herself with an effort. She said, shakily, "Your partner isn't from your division, is he?"

"No," replied Baley miserably. "He's—a complete stranger."

"How do I treat him?"

"Like anybody else. He's just my partner, that's all."

He said it so unconvincingly that Jessie's quick eyes narrowed. "What's wrong?"

"Nothing. Come, let's go back into the living room. It'll begin to look queer."

**L**IJE Baley felt a little uncertain about the apartment now, though he had always been proud of it. It had three large

rooms; the living room, for instance, was an ample fifteen feet by eighteen. There was a closet in each room. One of the main ventilation ducts passed directly by. It meant a rumbling noise, but, on the other hand, assured first-rate temperature control and well-conditioned air. Nor was the apartment far from either Personal, which was a prime convenience.

But with the creature from worlds beyond space sitting in the midst of it, the apartment suddenly seemed cramped.

Jessie said, with a gaiety that was slightly synthetic, "Have you and Mr. Olivaw eaten, Lije?"

"As a matter of fact," said Baley quickly, "Daneel will not be eating with us. I will, though."

Jessie accepted the situation without question. With food supplies so narrowly controlled, it was good form to refuse hospitality.

She said, "I hope you won't mind our eating, Mr. Olivaw. Lije, Bentley and I generally eat at the Community Kitchen. There's more variety, and just between you and me, bigger helpings, too. But Lije and I do have permission to eat in our apartment three times a week if we want to—Lije is quite successful at the Bureau and we have very nice status—and I thought that just for this occasion, if you



wanted to join us, we would have a little private feast of our own, though I do think that people who overdo their privacy privileges are anti-social."

R. Daneel listened politely.

Baley said, with an under-cover "shushing" wiggle of his fingers, "Jessie, I'm hungry."

"Would I be breaking a custom, Mrs. Baley, if I addressed you by your given name?" R. Daneel asked.

"Why, no, of course not." Jessie folded a table out of the wall and plugged the plate warmer into the central depression on the tabletop. "You go right ahead and call me Jessie all you like—uh—Daneel." She giggled.

Baley was getting rapidly more uncomfortable. Jessie thought R. Daneel a man. The situation would be something to boast of and talk about in Women's Personal. He was good-looking in a wooden way, too, and Jessie was pleased with his deference. Anyone could see that.

Baley wondered what R. Daneel thought of Jessie. She hadn't changed much in eighteen years, or at least not to Baley. She was heavier, of course, and her figure had lost its youthful vigor. But that's all beside the point, thought Baley somberly. On the Outer Worlds, the women were supposedly tall and as slim and regal as the men and those

must be the kind of women R. Daneel was used to.

But R. Daneel seemed quite unperturbed by Jessie's conversation, her appearance or her appropriation of his name. He said, "Are you sure that is proper? The name, Jessie, seems to be a diminutive. Perhaps its use is restricted to members of your immediate circle and I would be more proper if I used your full given name."

Jessie, breaking open the insulating wrapper on the dinner ration, bent her head in sudden concentration.

"Just Jessie," she said tightly.

"Very well, Jessie."

THE door opened and a youngster entered cautiously. His eyes found R. Daneel almost at once.

"My son Bentley," said Baley.

"This is Mr. Olivaw, Ben."

"He's your partner, huh, Dad? How d'ye do, Mr. Olivaw." Ben's eyes grew large and luminous. "Say, Dad, what happened down in the shoe place? The newscast said—"

"Don't ask any questions now, Ben."

Bentley's face fell and he looked toward his mother, who motioned him to a seat.

"Did you do what I told you, Bentley?" she asked, when he sat down. His hair was as dark as

his father's and he was going to have his father's height, but he had Jessie's oval face, her hazel eyes, her light-hearted way of looking at life.

"Sure, Mom," said Bentley, hitching himself forward a bit to look into the double dish from which savory vapors were already rising. "What we got to eat? Nöt zymoveal again, Mom? Huh, Mom?"

"There's nothing wrong with zymoveal," said Jessie, her lips pressing together. "Now you just eat what's put before you and let's not have any comments."

It was quite obvious they were having zymoveal.

Baley took his own seat. He himself would have preferred something other than zymoveal, with its sharp flavor and definite aftertaste, but Jessie had explained her problem before this.

"Well, I just can't, Life," she had said. "I live right here on these levels all day and I can't make enemies or life wouldn't be bearable. They know I used to be assistant dietitian and if I just walked off with steak or chicken every other week, when there's hardly any one else on the floor that has private eating privileges even just on Sunday, they'd say it was pull or friends in the prep-room. It would be talk, talk, talk, and I wouldn't be able to put my nose out the door or

visit Personal in peace. As it is, zymoveal-and protoveg are very good. They're well-balanced nourishment with no waste and, as a matter of fact, they're full of vitamins and minerals and everything anyone needs and we can have all the chicken we want when we eat in Community on the chicken Tuesdays."

Baley gave in easily. It was as Jessie said—the first problem of living is to minimize resentment from the crowds that surround you on all sides. Bentley was a little harder to convince.

HE said, "Gee, Mom, why can't I use Dad's ticket and eat in Community myself? I'd just as soon."

Jessie shook her head in annoyance and said, "I'm surprised at you, Bentley. What would people say if they saw you eating by yourself as though your own family weren't good enough for you or had thrown you out of the apartment?"

"Well, gosh, it's none of people's business."

Baley said, with a nervous edge in his voice. "Do as your mother tells you, Bentley."

Bentley shrugged unhappily.

R. Dancel said suddenly, from the other side of the room, "Have I the family's permission to view these book-films during your meal?"

"Oh, sure," said Bentley, slipping away from the table, a look of instant interest upon his face. "They're mine. I got them from the library on special school permit. I'll get you my viewer. It's a pretty good one. Dad gave it to me for my last birthday."

He brought it to R. Daneel and asked, "Are you interested in robots, Mr. Olivaw?"

Baley abruptly dropped his spoon and bent to pick it up.

R. Daneel said, "Yes, Bentley. I am quite interested."

"Then you'll like these. They're all about robots. I've got to write an essay on them for school, so I'm doing research. It's quite a complicated subject," he explained importantly. "I'm against them myself."

"Sit down, Bentley," said Baley unhappily, "and don't bother Mr. Olivaw."

"He's not bothering me, Elijah. I'd like to talk to you about the problem another time, Bentley. Your father and I will be very busy tonight."

"Thanks, Mr. Olivaw." Bentley took his seat and with a look of accusation in his mother's direction, cut off a portion of the pink zymoveal with his fork.

Baley thought: Busy tonight?

Then, with a resounding shock, he remembered his job. He thought of a Spacer lying dead in Spacetown and realized that,

for hours, he had been so involved with his own deadly dilemma that he had forgotten the cold fact of murder.

## CHAPTER V

JESSIE said good-by to them. She was wearing a formal hat and a little jacket of keratofiber as she said, "I hope you'll excuse me, Mr. Olivaw. I know you have a great deal to discuss with Lije."

She pushed her son ahead of her after she opened the door.

"When will you be back, Jessie?" asked Baley.

She paused. "When do you want me to be back?"

"Well, no use staying out all night. Why don't you come back your usual time? Midnight or so." He looked doubtfully at R. Daneel.

R. Daneel nodded. "I regret having to drive you from your home."

"Don't worry about that, Mr. Olivaw. This is my usual evening out with the girls, anyway. Come on, Ben."

The youngster was rebellious. "Aw, why the dickens do I have to go? I'm not going to bother them. Yeast!"

"Now do as I say."

"Well, why can't I go to the etherics along with you?"

"Because I'm going with some friends and you've got other

things—"The door closed behind them.

The moment had come. Baley had put it off in his mind. He had thought: First let's meet the robot and see what he's like. Then it was: Let's get him home. And then: Let's eat.

But now there was no excuse for further delay. It was down at last to the question of murder, of interstellar complications, of possible raises in ratings, of possible disgrace and declassification. And he had no way of even beginning except to turn to the robot for help.

His fingernails moved aimlessly on the table, which had not been returned to its wall recess.

R. Dancel said, "How secure are we against being overheard?"

Baley looked up, surprised. "No one would listen to what's going on in another man's apartment."

"It is not your custom to eavesdrop?"

"You might as well suppose they'd—I don't know—that they'd look in your plate while you're eating."

"Or that they would commit murder?"

"What?"

"It is against your customs to kill, is it not, Elijah?"

Baley felt anger rising. "See here, if we're going to be partners, don't try to imitate Spacer arro-

gance. There's no room for it in you, R. Dancel." He could not resist emphasizing the "R."

"I am sorry if I have hurt your feelings, Elijah. My intention was only to indicate that, since human beings are occasionally capable of murder in defiance of custom, they may be able to violate custom for the smaller impropriety of eavesdropping."

"The apartment is adequately insulated," said Baley, still irritated. "You haven't heard anything from the apartments on any side of us, have you? Well, they won't hear us, either. Besides, why should anyone think anything of importance is going on here?"

"We must not underestimate the enemy."

**B**ALEY shrugged. "Let's get started. My information is sketchy, so I can lay out my hand without much trouble. I know that a man named Roj Nemennuh Sarton, a citizen of the planet Aurora and a resident of Spacetown, has been murdered by person or persons unknown. I understand that it is the opinion of the Spacers that this is not an isolated event. Am I right?"

"You are entirely right, Elijah."

"They tie it up with recent attempts to sabotage the Spacer-sponsored project of converting us to an integrated human/robot

society on the model of the Outer Worlds, and assume the murder was the product of a well-organized terrorist group."

"Yes."

"Then to begin with, is this Spacer theory necessarily true? Why can't the murder have been the work of an isolated fanatic? There is strong anti-robot sentiment on Earth, but there are no organized parties advocating violence of this sort."

"Not openly, perhaps."

"Even a group conspiring to destroy robots and robot-factories would have the common sense to realize that the worst thing they could do would be to murder a Spacer. It seems much more likely to have been the work of an unbalanced mind."

R. Daneel thought carefully, then said, "I think the weight of probability is against the 'fanatic' theory. The person killed was too well-chosen and the time of the murder too appropriate for anything but deliberate planning."

"Well, then, you've got more information than I have. Spill it!"

"Your phraseology is obscure, but I think I understand. I will have to explain some of the background to you. As seen from Spacetown, Elijah, relations with Earth are unsatisfactory."

"Tough," muttered Baley coldly.

"I have been told that when

Spacetown was first established, most of our people assumed Earth would be willing to adopt the integrated society that has worked so well on the Outer Worlds. Even after the first riots, we thought that it was only a matter of your people getting over the first shock of novelty. That has not proven to be the case. Even with the cooperation of the Terrestrial government and of most of the various City governments, resistance has been continuous and progress has been very slow. Naturally, this has been a matter of great concern to our people."

"Out of altruism, I suppose."

"Not entirely," said R. Daneel, "although it is good of you to attribute worthy motives to them. It is our common belief that a healthy and modernized Earth would be of great benefit to the whole Galaxy. At least it is the common belief among our people at Space town. I must admit that there are strong elements opposed to them on the Outer Worlds."

"What? Disagreement among the Spacers?"

"Certainly. There are some who think that a modernized Earth will be a dangerous empire-building Earth. This is particularly true among the populations of those older worlds. They are closer to Earth and have greater reason to remember the first few

centuries of interstellar travel when their worlds were controlled, politically and economically, by Earth."

**L**IJE Baley sighed. "Ancient history. Are they really worried? Are they still sore at us for things that happened a thousand years ago?"

"Humans," said R. Daneel, "have their own peculiar make-up. They are not as reasonable, in many ways, as robots, since their circuits are more reactive than logical. I am told that this, too, has its advantages."

"Perhaps it may," said Baley drily.

"You are in a better position to know. In any case, continuing failure on Earth has strengthened the Nationalist parties on the Outer Worlds. They say it is obvious that Earthmen are different from Spacers and that if we imposed robots on Earth by superior force, we would be losing destruction on the Galaxy. Earth's population is eight billions, while the total population of the fifty Outer Worlds combined is scarcely more than five and a half billions. Our people here, particularly Dr. Sarton—"

"He was a doctor?"

"A Doctor of Sociology, specializing in robotics, and a very brilliant man."

"I see. Go on."

"Dr. Sarton felt that the time had come to make a supreme effort to understand the psychology of the Earthman. It is easy to say that your people are innately conservative and to speak tritely of 'the unchanging Earth' and 'the inscrutable Terrestrial mind,' but Dr. Sarton said we could not dismiss the Earthman with a proverb or a bromide. He claimed the Spacers who were trying to remake Earth must abandon the isolation of Space-town and mingle with Earthmen. They must live as they, think as they, be as they."

Baley said, "The Spacers? Impossible."

"You are quite right," agreed R. Daneel. "Despite his views, Dr. Sarton himself could not have brought himself to enter any of the Cities and he knew it. He would have been unable to bear the noise and rush of the crowds. Even if he had been forced inside at the point of a blaster, the turmoil would have distracted him so that he could never have penetrated the truths for which he sought."

"What about the way they're always worrying about disease?" demanded Baley. "Don't forget that. I don't think there's one of them who would risk entering a City for that reason alone."

"There is that, too. Disease in the Earthly sense is unknown

on the Outer Worlds and the fear of the unknown is always morbid. Dr. Sarton appreciated all of this and, nevertheless, he insisted on the necessity of growing to know the Earthman and his way of life intimately."

"He seems to have worked himself into a corner."

"Not quite. The objections to entering the City hold for human Spacers. Robot Spacers are another thing entirely."

**B**ALEY thought: I keep forgetting, damn it. Aloud, he said, "Oh?"

"Yes," said R. Daneel. "We can be designed for adaptation to Earthly conditions. We could be accepted by Earthmen and allowed a closer view of their life."

"And you yourself—" began Baley in sudden enlightenment.

"Am just such a robot. For a year, Dr. Sarton has been working upon the design and construction. I was the first of his robots and so far the only one. Unfortunately, my education is not yet complete. I have been hurried into my role prematurely as a result of the murder."

"Then not all Spacer robots are like you? I mean some look more like robots and less like humans. Right?"

"Why, naturally. The outward appearance is dependent on a robot's function. My own func-

tion requires a very manlike appearance. Others are different, although all are humanoid. Certainly they are more humanoid than the primitive models I saw at the shoe counter. Are all your robots being manufactured like that?"

"More or less," said Baley. "You don't approve?"

"It is difficult to accept a gross parody of the human form as an intellectual equal. Can your factories do no better?"

"I'm sure they can, Daneel. I think we just prefer to know when we're dealing with a robot and when we're not." He stared directly into the robot's eyes as he said that. They were bright and moist, as a human's would be, but it seemed to Baley that their gaze was steady and did not flicker slightly from point to point as a man's would.

R. Daneel said, "I am hopeful that in time I will grow to understand that point of view."

For an instant, Baley thought there was sarcasm in the remark, then dismissed the possibility. The robot was undoubtedly being quite sincere.

"In any case," said R. Daneel, "Dr. Sarton saw clearly the fact that it was a case for C/Fe."

"What's that?"

"Just the chemical symbols for the elements carbon and iron, Elijah. Carbon is the basis of

human life, and iron of robot life. It becomes easy to speak of C/Fe when you wish to express a culture that combines the best of the two on an equal but parallel basis."

"See fee. Do you write it with a hyphen or how?"

"No, Elijah. A diagonal line between the two is the accepted way. It symbolizes neither one nor the other, but a mixture of the two, without priority."

**A** GAINST his will, Baley found himself interested. Formal education on Earth included virtually no information on Outer World history or sociology after the Great Rebellion that made them independent of the mother planet. The popular book-film romances, to be sure, had their

stock Outer World characters: the visiting tycoon, choleric and eccentric; the beautiful heiress, invariably smitten by the Earthman's charms; the arrogant Spacer rival, wicked and forever beaten. These were worthless sources, since Spacers never entered Cities and Spacer women virtually never visited Earth.

For the first time in his life, Baley was stirred by an odd curiosity. What was Spacer life really like?

He said, "I think I get what you're driving at. Your Dr. Sartton was attacking the problem of Earth's conversion to C/Fe from a new and promising angle. Our conservative groups—Medievalists, as they call themselves—were perturbed. They were afraid he might succeed. So they killed





him. That's the motivation that makes it an organized plot and not an isolated outrage. Right?"

"Quite right."

Baley whistled thoughtfully under his breath. His long fingers tapped lightly against the table. Then he shook his head. "It won't wash. It won't wash at all."

"I do not understand."

"An Earthman walks into Spacetown, walks up to Dr. Sartan, blasts him, and walks out. But the entrance to Spacetown is guarded."

R. Daneel nodded. "No Earthman can possibly have passed through the entrance illegally."

"Then where does that leave you?"

"It would leave us in a confusing position, Elijah, if the entrance were the only way of reaching Spacetown from New York City."

Baley watched his partner thoughtfully. "I don't get you. It's the only connection between the two."

"Directly between the two, yes. May I have a piece of paper and a writer? Thank you. Look, partner Elijah. I will draw a big circle and label it 'New York City.' Now, tangent to it, I will draw a small circle and label it 'Spacetown.' Here, where they touch, I draw an arrowhead and label it 'Barrier.' Now do you see no other connection?"

Baley said, "Of course not. There is no other connection."

"In a way, I am glad to hear you say this. It is in accordance with what I have been taught about terrestrial ways of thinking. The Barrier is the only direct connection. But both the City and Spacetown are open to the countryside in all directions. It is possible for a Terrestrial to leave the City at any of numerous exits and strike out cross-country to Spacetown, where no Barrier will stop him."

THE tip of Baley's tongue touched his upper lip and for a moment stayed there. Then he said, "Cross-country?"

"Yes."

"Cross-country! Alone?"

"Why not?"

"Walking?"

"That would offer the least chance of detection. The murder took place early in the working day and the trip was undoubtedly negotiated before dawn."

"Impossible! There isn't a man in the City who would do it. Leave the City? Alone?"

"Ordinarily, it would seem unlikely. We Spacers know that. It is why we guard only the entrance. Even in the Great Riot, your people attacked only at the Barrier that then protected the entrance. Not one left the City."

"Well, then?"

"Now we are dealing with an unusual situation. It is not the blind attack of a mob following the line of least resistance, but the organized attempt of a small group to strike deliberately at the unguarded point. It explains why, as you say, a Terrestrial could enter Spacetown, walk up to his victim, kill him, and walk away. The man attacked through a complete blind spot on our part."

Baley shook his head. "It's too unlikely. Have your people done anything to check that theory?"

"Yes, we have. Your Commissioner of Police was present almost at the time of the murder—"

"I know. He told me so."

"That, Elijah, is another example of the timeliness of the murder. Your Commissioner has cooperated with Dr. Sarton in the past and he was the Earthman with whom Dr. Sarton planned to make initial arrangements for the infiltration of your City by robots such as myself. The appointment for that morning was to concern that. The murder, of course, stopped those plans, at least temporarily. The fact that it happened when your own Commissioner of Police was actually within Spacetown made the entire situation more difficult and embarrassing for Earth, and for our own people, too.

"But that is not what I started to say. Your Commissioner was

present. We said to him, 'The man must have come cross-country.' Like you, he said, 'Impossible' or perhaps 'Unthinkable.' He was quite disturbed, of course, and perhaps that may have made it difficult for him to see the essential point. Nevertheless, we forced him to begin checking that possibility almost at once."

**B**ALEY thought of the Commissioner's broken glasses and, even in the middle of grim thoughts, a corner of his mouth twitched. Poor Julius! Yes, he would be disturbed. There would be no way for Enderby to have explained the situation to the lofty Spacers, who looked upon physical disability as a peculiarly disgusting attribute of the non-genetically selected Earthmen. That is, he couldn't without losing face, and face was valuable to Police Commissioner Julius Enderby. Well, Earthmen had to stick together in some respects. The robot would never find out about Enderby's nearsightedness from Baley.

R. Dancel continued, "One by one, the various exit points from the City were investigated. Do you know how many there are, Elijah?"

Baley hazarded, "Twenty?"

"Five hundred and two."

"How many?"

"Originally, there were far more. Your City represents a slow growth, Elijah. It was once open to the sky and people crossed from City to country freely."

"I know that."

"Well, when it was first enclosed, there were many exits left. Five hundred and two still remain. The rest are built over or blocked up. We are not counting, of course, the entrance points for air-freight."

"Well, what of the exit points?"

"They are unguarded. We could find no official who was in charge or who considered them under his jurisdiction. A man could have walked out of any of them at any time and returned at will. He would never have been detected."

"Anything else? The weapon was gone, I suppose."

"Oh, yes."

"Any clues of any sort?"

"None. We have investigated the grounds surrounding Spacetown thoroughly. The robots on the truck farms were quite useless as possible witnesses. They were little more than automatic farm machinery; scarcely humanoid. And there were no humans."

"Uh-huh. What next?"

"Having failed, so far, at one end, Spacetown, we will work at the other, New York City. It

will be our duty to track down all possible subversive groups, to sift all dissident organizations—"

"How much time do you intend to spend?" interrupted Baley.

"As little as possible, as much as necessary."

"WELL," said Baley, thoughtfully, "I wish you had another partner in this mess."

"I do not," said R. Daneel. "The Commissioner spoke very highly of your loyalty and ability."

"It was nice of him," said Baley sardonically. He thought: Poor Julius. I'm on his conscience and he tries hard.

"We didn't rely entirely on him," said R. Daneel. "We checked your records. You have expressed yourself openly against the use of robots in your department."

"Oh? Do you object?"

"Not at all. Your opinions are your own. But it made it necessary for us to check your psychological profile very closely. We know that although you dislike robots intensely, you will work with one if you conceive it to be your duty. You have an extraordinarily high loyalty index and a respect for legitimate authority. It is what we need. Commissioner Enderby judged you well."

"You have no personal resentment toward my anti-robot sentiments?"

R. Daneel said, "If they do not prevent you from working with me and helping me do what is required of me, how can they matter?"

Baley felt stopped. He said beligerently, "Well, then, if I pass the test, how about you? What makes you a detective?"

"I do not understand you."

"You were designed as an information-gathering machine. A man-imitation to record the facts of human life for the Spacers."

"That is a good beginning for an investigator, is it not, to be an information-gathering machine?"

"A beginning, maybe. But it's not all there is, by a long shot."

"To be sure, there has been a final adjustment of my circuits."

"I'd be curious to hear the details of that, Daneel."

"That is easy enough. A particularly strong drive has been inserted into my motivation banks—a desire for justice."

"Justice!" cried Baley. The irony faded from his face and was replaced by a look of the most earnest distrust.

But R. Daneel turned swiftly in his chair and stared at the door. "Someone is out there."

The door opened and Jessie, pale and thin-lipped, walked in.

Startled, Baley explained, "Why, Jessie! Is anything wrong?"

She stood there, eyes not meeting his. "I'm sorry. I had to—" Her voice trailed off.

"Where's Bentley?"

"He's to stay the night in the Youth Hall."

"Why? I didn't tell you to do that."

"You said your partner would stay the night. I felt he would need Bentley's room."

R. Daneel said, "There was no necessity, Jessie."

Jessie lifted her eyes to R. Daneel's face, staring at it earnestly.

Baley looked at his fingertips, sick at what might follow, somehow unable to interpose. The momentary silence pressed thickly on his eardrums and then far away, as though through folds of plaster, he heard his wife say, "I think you are a robot, Daneel."

And R. Daneel replied, in a voice as calm as ever, "I am."

## CHAPTER VI

ON the uppermost levels of some of the wealthiest subsections of the City are the natural Solariums, where a partition of quartz with a movable metal shield excludes the air, but lets in the sunlight. There the wives and daughters of the City's high-

est administrators and executives may tan themselves. A unique thing happens there every evening.

Night falls.

In the rest of the City (including the UV-Solariums, where the millions, in strict sequence of allotted time, might occasionally expose themselves to the artificial wavelengths of arc-lights) there are only the arbitrary cycles of hours.

The business of the City might easily have continued in three eight-hour or four six-hour shifts, by "day" and "night" alike. Light and work could easily proceed endlessly. There were always civic reformers who periodically suggested such a thing in the interests of economy and efficiency.

The notion was never accepted.

Much of the earlier habits of Earthly society had been given up in the interests of that same economy and efficiency: space, privacy, even much of free will. They were the products of civilization, however, and not more than ten thousand years old.

The adjustment of sleep to night, however, was as old as Man—a million years. Although the evening was unseen, apartment lights dimmed as the hours of darkness passed and the City's pulse sank. No one could have told noon, from midnight by any

cosmic phenomenon along the enclosed avenues of the City, yet mankind followed the mute partitionings of the hour-hand.

The Expressways emptied, the noise of life fell, the moving mob among the colossal alleys melted away; New York City lay in Earth's unnoticed shadow, and its population slept.

Elijah Baley did not sleep. He lay in bed and there was no light in his apartment, but that was as far as it went.

Jessie lay next to him, motionless in the darkness. He had not felt nor heard her move.

On the other side of the wall sat, stood, lay (Baley wondered which) R. Daneel Olivaw.

Baley whispered, "Jessie?"

The dark figure beside him stirred slightly under the sheet. "What do you want?"

"Jessie, don't make it worse for me."

"You might have told me."

"How could I? I was planning to, when I could think of a way. Jehoshaphat, Jessie—"

"Sh!"

Baley's voice returned to its whisper. "How did you find out? Won't you tell me?"

JESSIE turned toward him. He could sense her eyes looking through the darkness at him.

"Lije." Her voice was scarcely more than a stirring of air. "Can

he hear us, do you think?"

"Not if we whisper."

"How do you know? Maybe he has special hearing to pick up tiny sounds. Spacer robots can do all sorts of things."

Baley knew that the pro-robot propaganda was forever stressing the miraculous feats of the Spacer robots; their endurance, their extra senses, their service to humanity in a hundred novel ways. Personally, he thought that approach defeated itself. Earthmen hated the robots all the more for their superiority.

He whispered, "Not Dancel. They wanted him to be accepted as a human being, so he must have only human senses."

"How do you know?"

"If he had extra senses, there would be too much danger of his giving himself away as non-human by accident. He would do too much, know too much."

"Well, maybe."

A minute passed and Baley tried a second time. "Jessie, if you'll just let things be until—until— Look, dear, it's unfair of you to be angry."

"Angry? Oh, Lije, you fool! I'm not angry. I'm scared; I'm scared clean to death."

For a while, they clung together, and Baley's growing sense of injury evaporated into a troubled concern.

"Why, Jessie? There's nothing

to be worried about. He's harmless. You know he can't hurt humans."

"Can't you get rid of him, Lije?"

"It's Department business. How can I?"

"What kind of business, Lije? Tell me."

"Now, Jessie, I'm surprised at you." He groped for her cheek in the darkness and patted it. It was wet. Using his pajama sleeve, he carefully wiped her eyes. "Now, look, you're being a baby."

"Tell them at the Department to have someone else do it, whatever it is. Please, Lije."

Baley's voice hardened a bit. "Jessie, you've been a policeman's wife long enough to know an assignment is an assignment."

"Well, why did it have to be you?"

"Julius Enderby—"

She stiffened in his arms. "I might have known. Why can't you tell Julius Enderby to have someone else do the dirty work just once?"

**E**NDERBY had been a fighting word with them since their engagement. He had been two classes ahead of Baley at the City School of Administrative Studies. They had been friends. When Baley had taken his battery of aptitude tests and neuroanalysis and found himself in line for the

police force, Enderby was already there before him. Enderby had moved into the plainclothes division.

Baley followed Enderby, but at a continually greater distance. Baley was capable enough, efficient enough, but he lacked something that Enderby had. Enderby fitted the administrative machine perfectly. He was one of those persons born for a bureaucracy. The Commissioner wasn't a great brain, and Baley knew it. He had his childish peculiarities, his intermittent rash of ostentatious Medievalism, for instance. But offended no one; he took orders gracefully; he gave them with the proper mixture of gentleness and firmness. He even got along with the Spacers, though perhaps too obsequious to them. (Baley himself could never have dealt with them for half a day without getting into a state of bristle; he was sure of that, even though he had never really spoken to a Spacer.) But they trusted Enderby and that made him extremely useful to the City.

So, in a Civil Service where smooth and sociable performance was more useful than an individualistic competence, Enderby went up the scale quickly, and was at the Commissioner level when Baley was nothing more than a C-5. Baley did not resent

the contrast, though he was human enough to regret it. Enderby did not forget their earlier friendship and, in his queer way, tried to make up for his success by doing what he could for Baley.

The assignment of partnership with R. Daneel was one example. It was tough and unpleasant, but there was no question that it carried the promise of tremendous advancement. The Commissioner might have given the chance to someone else. His own talk, that morning, of needing a favor, masked but did not hide that fact.

Jessie never saw things that way. On similar occasions in the past, she had said, "It's your silly loyalty index. I'm so tired of hearing everyone praise you for being so full of a sense of duty. Think of yourself once in a while. I notice the ones on top don't bring up the topic of their own loyalty index."

Baley lay in bed in a state of stiff wakefulness, letting Jessie calm down. He had to think. He had to be certain of his suspicions. Little things chased one another and fitted together in his mind. Slowly, they were building into a pattern.

HE felt the mattress give as Jessie stirred.

"Like?" Her lips were at his ear. "Why don't you resign?"

"Don't be crazy."

"Why not?" She was suddenly almost eager. "You can get rid of that horrible robot that way. Just walk in and tell Enderby you're through."

Baley said coldly, "I can't resign in the middle of an important case. I can't throw the whole thing down the disposal tube just any time I feel like it. A trick like that means declassification for cause."

"You can work your way up again. You can do it, Lije."

"Civil Service doesn't take men who are declassified for cause. Manual labor is the only thing I can do; the only thing you could do. Bentley would lose all inherited status. For God's sake, Jessie, you don't know what it's like."

"I've read about it. I'm not afraid of it."

"You're crazy. You're plain crazy." Baley could feel himself trembling. There was a familiar, flashing picture of his father in his mind's eye. His father, mold-ering away toward death.

Jessie sighed heavily.

Baley's mind turned savagely away from her. In desperation, it returned to the pattern it was constructing.

He said tightly, "Jessie, you've got to tell me. How did you find out Daneel was a robot? What made you decide that?"

She began, "Well—" and just ran down. It was the third time she had tried to explain and failed.

He crushed her hand in his, willing her to speak. "Please, Jessie. What's frightening you?"

She said, "I just guessed he was a robot, Lije."

He said, "There wasn't anything to make you guess that, Jessie. You didn't think he was a robot before you left, now did you?"

"No-o, but I got to thinking—"

"Come on, Jessie. What was it?"

"Well—the girls were talking in the Personal. You know how they are. Just talking about everything."

Women! thought Baley.

"Anyway," said Jessie. "The rumor is all over town. It must be."

**B**ALEY felt a quick and savage touch of triumph. Another piece in place!

"All over town?" he repeated.

"It was the way they sounded. They said there was talk about a Spacer robot loose in the City. He was supposed to look just like a man and to be working with the police. They even asked me about it. They laughed and said, 'Does your Lije know anything about it, Jessie?' And I laughed and said, 'Don't be silly!'



"Then we went to the etherics and I got to thinking about your new partner. Do you remember those pictures you brought home, the ones Julius Enderby took in Spacetown, to show me what Spacers looked like? Well, I got to thinking that's what your partner looked like. I said to myself, Oh, my God, someone must've recognized him in the shoe department and he's with Lije and I just said I had a headache and I ran—"

Baley said, "Now, Jessie, get hold of yourself. You're not afraid of Danciel himself. You faced up to him when you came home."

His teeth bit his last word in two. He sat up in bed, eyes uselessly wide in the darkness.

He felt his wife move against his side. His hand leaped, found her lips and pressed against them. She heaved against his grip, her hands grasping his wrist and wrenching, but he leaned down against her still more heavily.

Then, suddenly, he released her. She whimpered.

He said huskily, "Sorry, Jessie. I was listening."

He got out of bed, pulled warm Plastofilm over the soles of his feet.

"Lije, where are you going? Don't leave me."

"It's all right. I'm just going to the door."

The Plastofilm made a soft, shuffling noise as he circled the bed. He cracked the door to the living room and waited a long moment. Nothing happened. It was so quiet, he could hear the thin whistle of Jessie's breath from their bed and the dull rhythm of his pulse in his ears.

**H**IS hand crept through the opening of the door, snaking out to the spot he needed no light to find. His fingers closed upon the knob that controlled the ceiling illumination. He exerted the smallest pressure he could and the ceiling gleamed dimly, so dimly that the lower half of the living room remained in semi-dusk.

He saw enough, however. The main door was closed and the living room lay lifeless and quiet.

He wrenched the knob back into the off position and scuttled back to bed.

It was all he needed. The pieces joined. The pattern was complete.

Jessie pleaded with him, "Lije, what's wrong?"

"Nothing's wrong, Jessie. Everything's all right. He's not here."

"The robot? Do you mean he's gone? For good?"

"No, no. He'll be back. And before he does, answer my question."

"What question?"

"What are you afraid of?"

Jessie said nothing.

Baley grew more insistent. "You said you were scared to death."

"Of him."

"No, we went through that."

Her words came slowly. "I thought if everyone knew he was a robot there might be a riot. We'd be killed."

"Why us?"

"You know what riots are like."

"They don't even know where the robot is, do they?"

"They might find out."

"And that's what you're afraid of, a riot?"

"Well—"

"Sh!" He pressed Jessie down to the pillow. Then he put his lips to her ear. "He's come back. Now listen and don't say a word. Everything's fine. He'll be gone in the morning and he won't be back. There'll be no riot, nothing."

He was almost contented as he said that. He felt he could sleep.

He thought again: No riot, nothing.

And no declassification.

And just before he actually fell asleep, he thought: Not even a murder investigation. Not even that.

The whole thing's solved—  
He slept.

## CHAPTER VII

ENDERBY polished his glasses with exquisite care and placed them upon the bridge of his nose.

Baley thought: It's a good trick. Keeps you busy while you're thinking what to say, and it doesn't cost money the way lighting up a pipe does.

And because the thought had entered his mind, he drew out his pipe and dipped into his pinched store of rough-cut. One of the few luxury crops still grown on Earth was tobacco, and its end was visibly approaching. Prices had gone up, never down, in Baley's lifetime: quotas down, never up.

Enderby, having adjusted his glasses, felt for the switch at one end of his desk and flicked his door into one-way transparency for a moment. "Where is he now, Lije?"

"He told me he wanted to be shown through the department, and I let Jack Tobin do the honors." Baley lit his pipe and tightened its baffle carefully. The Commissioner, like most non-indulgents, was petty about tobacco smoke.

"I hope you didn't tell him Dancel was a robot."

"Of course I didn't."

The Commissioner did not relax. One hand remained simlessly

busy with the automatic calendar on his desk.

"How is it?" he asked, without looking at Baley.

"Middling rough."

"I'm sorry, Lije."

Baley said firmly, "You might have warned me that he looked completely human."

The Commissioner showed surprise. "I didn't?" Then, with sudden petulance, "Damn it, you should have known. I wouldn't have asked you to have him stay at your house if he looked like R. Sammy, would I?"

"I know, Commissioner, but I'd never seen a robot like that and you had. I didn't even know such things were possible. I just wish you'd mentioned it, that's all."

"I'm sorry. I should have told you. But this job has me so on edge that half the time I'm snapping at people for no reason. He—I mean this Dancel thing—is a new-type robot. It's still in the experimental stage."

"He said so himself."

"Oh. Well, that's it."

Baley tensed a little. He said casually, teeth clenched on pipe-stem, "R. Dancel has arranged a trip to Spacetown for me."

"To Spacetown?" Enderby looked up with indignation.

"Yes. It's the logical next move, Commissioner. I'd like to see the scene of the crime; ask a few questions."

JULIUS Enderby shook his head decidedly. "I don't think that's a good idea, Lije. We've gone over the ground. I doubt there's anything new to be learned. And they're strange people. They've got to be handled with Plastofilm gloves. You don't have the experience." He added, with unexpected fervor, "I hate them!"

Baley injected hostility into his voice. "The robot came here and I should go there. It's bad enough sharing a front seat with a robot; I hate to take a back seat. Of course, if you don't think I'm capable of running this investigation, Commissioner—"

"It isn't that, Lije. It's not you, it's the Spacers. You don't know what they're like."

"Well, then, suppose you come along."

"No, Lije, I won't go there! Don't ask me to!" More quietly, he said, with an unconvincing smile, "Lots of work here, you know. I'm days behind."

Baley regarded him thoughtfully. "I tell you what, then. Why not get into it by trimension later on? Just for a while, you understand. In case I need help."

"Well, yes. I suppose I can do that." He sounded unenthusiastic.

"Good." Baley glanced at the wall-clock, nodded, and got up. "I'll be in touch with you."

Baley looked back as he left

the office, keeping the door open for part of an additional second. He saw the Commissioner's head begin bending down toward the crook of one elbow as it rested on the desk. The plainclothesman could almost swear he heard a sob.

Jehoshaphat! he thought, in outright shock.

He paused in the common room and sat on the corner of a nearby desk, ignoring its occupant, who looked up, murmured a casual greeting, and returned to his work.

Baley unclipped the baffle from the bowl of the pipe and blew into it. He inverted the pipe itself over the desk's small ash-vacuum and let the powdery-white tobacco ash vanish. He looked regretfully at the empty pipe, readjusted the baffle, and put it away. Another pipeful gone forever.

He reconsidered what had just taken place. In one way, Enderby had not surprised him. He had expected resistance to any attempt on his own part to enter Spacetown. He had heard the Commissioner talk often enough about the difficulties of dealing with Spacers, about the dangers of allowing any but experienced negotiators to have anything to do with them, even over trifles.

He had not expected, however, to have the Commissioner give

in so easily. He had supposed, at the very least, that Enderby would have insisted on accompanying him. The pressure of other work was meaningless in the face of the importance of this problem.

And that was not what Baley wanted. He wanted exactly what he got. He wanted the Commissioner to be present by trimesional personification so that he could witness the proceedings from a place of safety.

**S**AFETY was the keyword. Baley would need a witness who could not be put out of the way immediately. He needed that as the minimum guarantee of his own safety.

The Commissioner had agreed to it at once. Baley remembered the parting sob, or ghost of one, and thought: Jehoshaphat, the man's into this beyond his depth.

A cheerful, slurring voice sounded just at Baley's shoulder, and Baley started.

"What the devil do you want?" he demanded.

The smile on R. Sammy's face remained foolishly fixed. "Jack says to tell you Danzel is ready, Lije."

"All right. Now get out of here."

He frowned at the robot's departing back. There was nothing so irritating as having that



clumsy metal contraption forever making free with his front name. He'd complained about that when R. Sammy first arrived and the Commissioner had shrugged his shoulders and said, "You can't have it both ways, Lije. The public insists that City robots be built with a strong friendship circuit. All right, then. He is drawn to you. He calls you by the friendliest name he knows."

Friendship circuit! No robot

built, of any type, could possibly hurt a human being. That was the First Law of Robotics:

"A robot may not injure a human being, or, through inaction, allow a human being to come to harm."

No positronic brain was ever built without that injunction driven so deeply into its basic circuits that no conceivable derangement could displace it. There was no need for special-

ized friendship circuits.

Yet the Commissioner was right. The Earthman's fear and resentment of robots were so deep and so justified that friendship circuits had to be incorporated, just as all robots had to be made smiling. On Earth, at any rate.

R. Daneel, though, never smiled.

Sighing, Baley rose to his feet. He thought: Spacetown, next stop. Or, maybe, last stop.

**T**HE police forces of the City, as well as certain high officials, could still make use of individual squad-cars along the corridors of the City and even along the ancient underground motorways that were barred to foot-traffic. There were perennial demands by the Medievalists that these motorways be converted to children's playgrounds, to new shopping areas or to Expressway or Localway extensions.

The strong pleas of "Civic Safety" remained unvanquished, however. In cases of fires too large to be handled by local devices; in cases of massive breakdowns in power lines or ventilators; most of all in cases of serious riot, there had to be some means whereby the forces of the City could be mobilized at the stricken point in a hurry. No substitute for the motorways existed or could exist.

Baley had traveled along a motorway several times before in his life, but its indecent emptiness always depressed him. It seemed a million miles from the warm, living pulsation of the City. It stretched out like a blind and hollow worm before his eyes as he sat at the controls of the squad-car. It opened continuously into new stretches as he moved around this gentle curve or that. Behind him, he knew without looking, another blind and hollow worm continually contracted and closed. The motorway was well-lit, but lighting was meaningless in the silence and emptiness.

R. Daneel did nothing to break that silence or fill that emptiness. He looked straight ahead, as unimpressed by the empty motorway as by the bulging Expressway.

In one sounding moment, to the tune of a wild whine of the squad-car's siren, they popped out of the motorway and curved gradually into the vehicular lane of a City corridor.

The vehicular lanes were still conscientiously marked down each major corridor in reverence for one vestigial portion of the past. There were no vehicles any longer except for squad-cars, and pedestrians used the lanes in complete self-assurance. They scattered in indignant hurry before

the rush of Baley's squealing car.

Baley himself drew a freer breath as noise surged in about him, but it was an interval only. They turned into the subdued corridors that led to Spacetown Entrance.

NATURALLY, they were expected. The guards obviously knew R. Daneel by sight and, although themselves human, nodded to him without the least self-consciousness or condescension.

One approached Baley and saluted with perfect, if frigid, military courtesy. He was tall and grave, though not the perfect specimen of Spacer physique that R. Daneel was.

He said, "Your identification card, if you please, sir."

It was inspected quickly but thoroughly. Baley noticed that the guard wore flesh-colored gloves and had an all-but-unnoticeable filter in each nostril.

The guard saluted again and returned the card. He said, "There is a Men's Personal here which we would be pleased to have you use to shower."

Baley was about to deny the necessity, but as the guard stepped back to his place, R. Daneel said, "It is customary, Partner Elijah, for City-dwellers to shower before entering Spacetown. I tell you this since I know you

have no desire, through lack of information on this matter, to render yourself or ourselves uncomfortable. It is also advisable for you to attend to any matters of personal hygiene you may think advisable. There will be no facilities within Spacetown for that purpose."

"No facilities? That's impossible?"

"I mean, of course," said R. Daneel, "none for use by City-dwellers."

Baley's face filled with a clearly hostile astonishment.

R. Daneel said, "I regret the situation, but it is a matter of custom."

Wordlessly, Baley entered the Personal. He felt, rather than saw, R. Daneel entering behind him.

He thought: Checking on me? Making sure I wash the alleged City filth off myself?

For a furious moment, he reveled in the thought of the shock he was preparing for Spacetown. It seemed to him suddenly unimportant that he might, in effect, be pointing a blaster at his own chest.

The Personal was small, but it was well appointed and antiseptic in its cleanliness. There was a trace of sharpness in the air. Baley sniffed at it, momentarily puzzled.

Then he thought: Ozone!

They've got ultra-violet radiation flooding the place.

A little sign blinked on and off several times, then remained steadily lit. It said, "Visitor Will Please Remove All Clothing, Including Shoes, and Place It in the Receptacle Below."

Baley obeyed. He unhitched his blaster and blaster-strap and recircled it about his naked waist. It felt heavy and uncomfortable.

The receptacle closed and his clothing was gone. The lighted sign blanked out. A new sign flashed ahead.

It said: "Visitor Will Please Tend to Personal Needs, then Make Use of the Shower Indicated by Arrow."

Baley felt like a machine-tool being shaped by long-distance force-edges on an assembly line.

**H**IS first act upon entering the small shower cubicle was to draw up the moistureproof flap on his blaster holster and slip it down firmly. He knew by repeated test that he could still draw and fire it in less than five seconds.

There was no knob or hook on which to hang his blaster. There was not even a visible shower head. He placed the weapon in a corner away from the cubicle's entrance door.

Another sign flashed: "Visitor Will Please Hold Arms Directly

Out from His Body and Stand in the Central Circle with Feet in the Indicated Positions."

As he placed his feet in the small depressions allowed for them, the sign blanked out. A stinging, foaming spray hit him from ceiling, floor and four walls. He felt the water welling up even beneath the soles of his feet. For a full minute it lasted, his skin reddening under the combined force of the heat and pressure and his lungs gasping for air in the warm dampness. There followed another minute of cool, low-pressure spray, and then finally a current of warm air that left him dry and refreshed.

He picked up his blaster and blaster-strap and found that they, too, were dry and warm. He put them on and stepped out of the cubicle in time to see R. Daneel emerge from a neighboring shower. Of course! R. Daneel was not a City-dweller, but he had accumulated City dust.

Quite automatically, Baley looked away. Then with the thought that, after all, R. Daneel's customs were not City customs, he forced his unwilling eyes back for one moment. His lips quirked in a tiny smile. R. Daneel's resemblance to humanity was not restricted to his face and hands, but had been carried out with painstaking accuracy over the entire body.



Baley stepped forward in the direction he had been traveling continuously since entering the Personal. He found his clothes waiting for him, neatly folded. They had a warm, clean odor.

A sign said, "Visitor Will Please Resume His Clothing and Place His Hand in the Indicated Depression."

Baley did so. He felt a definite tingling in the ball of his middle finger as he laid it down upon the clean, milky surface. He lifted his hand hastily and found a little drop of blood oozing out. As he watched it, it stopped flowing.

He shook it off and pinched the finger. No more blood was flowing even then.

Obviously, they were analyzing his blood. He felt a surge of anxiety. His own yearly routine examination by Department doctors, he felt sure, was not carried on with the thoroughness or, perhaps, with the knowledge of these cold, robot-makers from outer space. He was not sure he wanted too probing an inquiry into the state of his health.

The time of waiting seemed long to Baley, but when the light flashed again, it said simply, "Visitor Will Proceed."

Baley drew a long breath of relief. He walked onward and stepped through an archway. Two metal rods closed in before him and, written in luminous air,

were the words: "Visitor is Warned to Proceed no Farther."

"What the devil—" called out Baley, forgetting in his anger the fact that he was still in the Personal.

**R.** DANEEL'S voice was in his ear. "The sniffers have detected a power source, I imagine. Are you carrying your blaster, Elijah?"

Baley whirled, his face a deep crimson. He tried twice, then managed to croak out, "A police officer has his blaster on him or in easy reach at all times."

It was the first time he had spoken in a Personal, proper, since he was ten years old. That had been in his Uncle Boris's presence and had merely been an automatic complaint when he stubbed his toe. Uncle Boris had slapped him hard when he reached home and had lectured him strongly on public decency.

R. Daneel said, "No visitor may be armed. It is our custom, Elijah. Even your Commissioner leaves his blaster behind on all visits."

Under almost any other circumstances, Baley would have walked away, away from Space-town and away from that robot. Now, however, he'd been given additional goads to go through with his plan and have his revenge.

In black anger, Baley unhitched his blaster belt. R. Daneel took it from him and placed it within a recess in the wall. A thin metal plate slid across it.

"If you will put your thumb in the depression," said R. Daneel, "only your thumb will open it later on."

Baley felt undressed, far more so, in fact, than he had felt in the shower. He stepped across the point at which the rods had barred him, and, finally, out the Personal.

He was back in a corridor again, but there was an element of strangeness about it. Up ahead, the light had an unfamiliar quality to it. He felt a whiff of air against his face. Automatically, he thought a squad-car had passed.

R. Daneel must have read his uneasiness in his face. He said, "You are in open air now, Elijah. It is unconditioned."

Baley felt faintly sick. How could the Spacers be so rigidly careful of a human body, merely because it came from the City, and then breathe the dirty air of the open fields? He tightened his nostrils, as though by pulling them together he could more effectively screen the ingoing air.

R. Daneel said, "I believe you will find the open air is not deleterious to human health."

"All right," said Baley faintly.

The air currents hit queasily against his face. They were gentle enough, but they were erratic. That bothered him.

Worse came. The corridor opened into blueness and as they approached its end, strong white light washed down. Baley had seen sunlight. He had been in a natural Solarium once in the line of duty. But protecting glass had enclosed the place and the Sun's own image had been refracted into a generalized glow. Here, all was open.

A Spacer was approaching. A tiny moment of terror struck Baley.

R. Daneel, however, stepped forward to greet the approaching man with a handshake. The Spacer turned to Baley and said, "Won't you come with me, sir? I am Dr. Han Fastolfe."

**I**T was better inside one of the domes. Baley found himself goggling at the size of the rooms and the way in which space was so carelessly distributed, but was thankful for the feel of the conditioned air.

Fastolfe said, sitting down and crossing his long legs, "I'm assuming that you prefer air-conditioning to unobstructed wind."

He seemed friendly enough. There were fine wrinkles on his forehead and a certain flabbiness to the skin below his eyes and

just under his chin. His hair was thinning, but showed no signs of gray. His large ears stood away from his head, giving him a humorous and homely appearance that comforted Baley.

Early that morning, Baley had looked once again at those pictures of Spacetown that Enderby had taken. R. Daneel had just arranged the Spacetown appointment and Baley was absorbing the notion that he was to meet Spacers in the flesh. Somehow that was considerably different from speaking to them across miles of carrier wave, as he had done on several occasions before.

The Spacers in those pictures had been, generally speaking, like those that were occasionally featured in the book-films: tall, grave, coldly handsome. Like R. Daneel Olivaw, for instance.

R. Daneel had named the Spacers for Baley and when Baley suddenly pointed and said, in surprise, "That isn't you, is it?" R. Daneel unemotionally answered, "No, Elijah, that was my designer, Dr. Sarton, the one who was murdered."

"You were made in your maker's image?" asked Baley sardonically, but there was no answer to that and Baley scarcely expected one. A robot wouldn't know anything about the Bible.

And now Baley looked at Han Fastolfe, a man who deviated

noticeably from the Spacer norm in looks, and the Earthman felt gratitude for that fact.

"Won't you accept food?" asked Fastolfe.

He indicated the table that separated himself and R. Daneel from the Earthman. It bore nothing but a bowl of vari-colored spheroids. Baley felt vaguely startled. He had taken them for table decorations.

R. Daneel explained, "These are the fruits of natural plant-life grown on Aurora. I suggest you try this kind. It is called an apple and is reputed to be tasty."

Fastolfe smiled. "R. Daneel does not know this by personal experience, of course, but he is quite right."

**B**ALEY brought an apple to his mouth. Its surface was red and green. It was cool to the touch and had a faint but pleasant odor. With an effort, he bit into it and the unexpected tartness hurt his teeth.

He chewed it gingerly. City-dwellers ate natural food, of course, whenever rations allowed it. He himself had eaten real meat and bread several times. But such food had always been processed in some way. It had been cooked or ground, blended or compounded. Fruit, now, properly speaking, should come in the form of sauce or preserve. What

he was holding must have come straight from the dirt of a planet's soil.

He thought: I hope they've washed it, at least. And again he wondered at the spottiness of Spacer notions about cleanliness.

Fastolfe said, "Let me introduce myself a bit more specifically. I am in charge of the investigation of the murder of Dr. Sarton at the Spacetown end as Commissioner Enderby is at the City end. If I can help you in any way, I stand ready to do so. We are as eager for a quiet solution of the affair and prevention of future incidents of this sort as any of you City men can be."

"Thank you, Dr. Fastolfe," said Baley. "Your attitude is appreciated."

So much, he thought, for the amenities. He bit into the center of the apple and hard, dark little ovoids popped into his mouth. He spat automatically. They flew out and fell to the ground. One would have struck Fastolfe's leg had not the Spacer moved it hastily.

Baley reddened, started to bend.

Fastolfe said, pleasantly, "It is quite all right, Mr. Baley. Just leave them, please."

Baley straightened again. He put the apple down gingerly. He had the uncomfortable feeling that once he was gone, the lost

little objects would be found and picked up by suction; the bowl of fruit would be burned or discarded far from Spacetown; the very room they were sitting in would be sprayed with viricide.

He covered his embarrassment with brusqueness. He said, "I would like to ask permission to have Commissioner Enderby join our conference by trimensional personification."

Fastolfe's eyebrows raised. "Certainly, if you wish it. Daneel, would you make the connection?"

**I**N stiff discomfort, Baley waited until the shiny surface of the large parallelopiped in one corner of the room dissolved away to show Commissioner Julius Enderby and part of his desk. At that moment, the discomfort eased and Baley felt nothing short of love for that familiar figure, and a nostalgic longing to be safely back in that office with him, or anywhere in the City, for that matter—even in the least prepossessing portion of the Jersey yeast vat districts.

Now that he had his witness, Baley saw no reason for delay. He said, "I believe I have penetrated the mystery surrounding the death of Dr. Sarton."

Out of the corner of his eyes, he saw Enderby springing to his feet and grabbing wildly (and successfully) at his flying spec-

tacles. By standing, the Commissioner thrust his head out of the limits of the trimensic receiver and was forced to sit down again, red-faced and speechless.

In a much quieter way, Dr. Fastolfe, head inclined to one side, was as startled. Only R. Daneel remained unmoved.

"Do you mean," said Fastolfe, "that you know who the murderer is?"

"No," Baley replied. "I mean there was no murder."

"What?" yelped Enderby.

"One moment, Commissioner

Enderby," said Fastolfe, raising a hand. His eyes held Baley's and he asked in a tensely quiet voice, "Do you mean that Dr. Sarton is alive?"

"That's exactly what I mean. And I believe I know where he is."

Enderby's slack mouth silently formed the word, but it was Fastolfe who said it:

"Where?"

"Right there," said Baley.

He pointed straight at R. Daneel Olivaw.

—ISAAC ASIMOV

CONTINUED NEXT MONTH

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## FORECAST

In next month's installment of *THE CAVES OF STEEL*, Isaac Asimov continues building the tension and threat of his mystery plot . . . while completely detailing the city-world of the future. When you finish the story, you'll have lived through a dangerous hunt in a society so realistically described that you could almost find your way around in it without a guide! Few things are more difficult than science fiction's integration of plot and unfamiliar background—when it's done well. Asimov has done it magnificently. The devil of his murder problem is that it must be solved in exactly the right way or disaster will come to the detective or Earth!

**KEEP YOUR SHAPE** by Robert Sheckley unfortunately was squeezed out of this issue. It'll definitely be in the next. The title, as previously noted, is more than an advertising slogan; it's a military command to the most fiercely rigid warriors ever seen on this planet!

The second novelet, *THE BOOK* by Michael Shaara, is a curiously tender story of a civilization that never has a moment's security! It's the reverse of the grass always being greener in the other fellow's yard—if you think you have troubles, try swapping them for somebody else's!

# the MODEL of a JUDGE

*Should a former outlaw become  
a judge—even if he need only  
pass sentence on a layer cake?*

By WILLIAM MORRISON

**R**ONAR was reformed, if that was the right word, but he could see that they didn't trust him. Uneasiness spoke in their awkward hurried motions when they came near him; fear looked out of their

eyes. He had to reassure himself that all this would pass. In time they'd learn to regard him as one of themselves and cease to recall what he had once been. For the time being, however, they still remembered. And so did he.

Illustrated by BURCHARD

Mrs. Claymore, of the Presiding Committee, was babbling. "Oh, Mrs. Silver, it's so good of you to come. Have you entered the contest?"

"Not really," said Mrs. Silver with a modest laugh. "Of course I don't expect to win against so many fine women who are taking part. But I just thought I'd enter to — to keep things interesting."

"That was very kind of you. But don't talk about not winning. I still remember some of the dishes you served for dinner at your home that time George and I paid you a visit. Mmmmm — they were really delicious."

Mrs. Silver uttered another little laugh. "Just ordinary recipes. I'm so glad you liked them, though."

"I certainly did. And I'm sure the judge will like your cake, too."

"The judge? Don't you usually have a committee?"

HE could hear every word. They had no idea how sharp his sense of hearing was, and he had no desire to disconcert them further by letting them know. He could hear every conversation taking place in ordinary tones in the large reception room. When he concentrated he could make out the whispers. At this point he had to concentrate, for Mrs. Claymore leaned over and breathed

into her friend's attentive ear.

"My dear, haven't you heard? We've had such trouble with that committee — there were such charges of favoritism! It was really awful."

"Really? But how did you find a judge then?"

"Don't look now — no, I'll tell you what to do. Pretend I said something funny, and throw your head back and laugh. Take a quick glance at him while you do. He's sitting up there alone, on the platform."

Mrs. Silver laughed gracefully as directed, and her eyes swept the platform. She became so excited, she almost forgot to whisper.

"Why, he's —"

"Shhh. Lower your voice, my dear."

"Why — he isn't human?"

"He's supposed to be — now. But, of course, that's a matter of opinion!"

"But who on Earth thought of making him judge?"

"No one on Earth. Professor Halder, who lives over on that big asteroid the other side of yours, heard of the troubles we had, and came up with the suggestion. At first it seemed absurd—"

"It certainly seems absurd to me!" agreed Mrs. Silver.

"It was the only thing we could do. There was no one else we could trust."

"But what does he know about cakes?"

"My dear, he has the most exquisite sense of taste!"

"I still don't understand."

"It's superhuman. Before we adopted Professor Halder's suggestion, we gave him a few tests. The results simply left us gasping. We could mix all sorts of spices — the most delicate, most exotic herbs from Venus or Mars, and the strongest, coarsest flavors from Earth or one of the plant-growing asteroids — and he could tell us everything we had added, and exactly how much."

**I** FIND that hard to believe, Matilda."

"Isn't it? It's honestly incredible. If I hadn't seen him do it myself, I wouldn't have believed it."

"But he doesn't have human preferences. Wasn't he — wasn't he —"

"Carnivorous? Oh, yes. They say he was the most vicious creature imaginable. Let an animal come within a mile of him, and he'd scent it and be after it in a flash. He and the others of his kind made the moon be came from uninhabitable for any other kind of intelligent life. Come to think of it, it may have been the very moon we're on now!"

"Really?"

"Either this, or some other

moon of Saturn's. We had to do something about it. We didn't want to kill them off, naturally; that would have been the easiest way, but so uncivilized! Finally, our scientists came up with the suggestion for psychological reforming. Professor Halder told us how difficult it all was, but it seems to have worked. In his case, at least."

Mrs. Silver stole another glance. "Did it? I don't notice any one going near him."

"Oh, we don't like to tempt fate, Clara. But, if there were really any danger, I'm sure the psychologists would never have let him out of their clutches."

"I hope not. But psychologists take the most reckless risks sometimes—with other people's lives!"

"Well, there's one psychologist who's risking his own life—and his own wife, too. You know Dr. Cabanis, don't you?"

"Only by sight. Isn't his wife that stuck-up thing?"

"That's the one. Dr. Cabanis is the man who had actual charge of reforming him. And he's going to be here. His wife is entering a cake."

"Don't tell me that she really expects to win!"

"She bakes well, my dear. Let's give the she-devil her due. How on Earth an intelligent man like Dr. Cabanis can stand her, I don't know, but, after all, he's the psy-



chologist, not I, and he could probably explain it better than I could."

**R**ONAR disengaged his attention.

So Dr. Cabanis was here. He looked around, but the psychologist was not in sight. He would probably arrive later.

The thought stirred a strange mixture of emotions. Some of the most painful moments of his life were associated with the presence of Dr. Cabanis. His early life, the life of a predatory carnivore, had been an unthinkingly happy one. He supposed that he could call his present life a happy one too, if you weren't overly particular how you defined the term. But that period in between!

That had been, to say the least, painful. These long sessions with Dr. Cabanis had stirred him to the depths of a soul he hadn't known he possessed. The electric shocks and the druggings he hadn't minded so much. But the gradual reshaping of his entire psyche, the period of basic instruction, in which he had been taught to hate his old life so greatly that he could no longer go back to it even if the way were open, and the conditioning for a new and useful life with human beings — that was torture of the purest kind.

If he had known what was

ahead of him, he wouldn't have gone through it at all. He'd have fought until he dropped, as so many of the others like him did. Still, now that it was over, he supposed that the results were worth the pain. He had a position that was more important than it seemed at first glance. He exercised control over a good part of the food supply intended for the outer planets, and his word was trusted implicitly. Let him condemn an intended shipment, and cancellation followed automatically, without the formality of confirmation by laboratory tests. He was greatly admired. And feared.

They had other feelings about him too. He overheard one whisper that surprised him. "My dear, I think he's really handsome."

"But, Charlotte, how can you say that about someone who isn't even human!"

"He looks more human than many human beings do. And his clothes fit him beautifully. I wonder — does he have a tail?"

"Not that I know of."

"Oh." There was disappointment in the sound. "He looks like a pirate."

"He was a kind of wolf, they tell me. You'd never guess, to see him, that he ran on all fours, would you?"

"Of course not. He's so straight and dignified."



"It just shows you what psychology can do."

"PSYCHOLOGY, and a series of operations, dear ladies," he thought sarcastically. "Without them I wouldn't be able to stand so nice and straight with the help of all the psychologists in this pretty little solar system of ours."

From behind a potted Martian nut-cactus came two low voices — not whispers this time. And there was several octaves difference in pitch between them. One male, one female.

The man said, "Don't be worried, sweetheart. I'll match your cooking and baking against anybody's."

There was a curious sound, between a click and a hiss. What human beings called a kiss, he thought. Between the sexes, usually an indication of affection or passion. Sometimes, especially within the ranks of the female sex, a formality behind which warfare could be waged.

The girl said tremulously, "But these women have so much experience. They've cooked and baked for years."

"Haven't you, for your own family?"

"Yes, but that isn't the same thing. I had to learn from a cookbook. And I had no one with experience to stand over me and teach me."

"You've learned faster that way than you'd have done with some of these old hens standing at your elbow and giving you directions. You cook too well. I'll be fat in no time."

"Your mother doesn't think so. And your brother said something about a bride's biscuits —"

"The older the joke, the better Charles likes it. Don't let it worry you." He kissed her again. "Have confidence in yourself, dear. You're going to win."

"Oh, Gregory, it's awfully nice of you to say so, but really I feel so unsure of myself."

"If only the judge were human and took a look at you, nobody else would stand a chance. Have I told you within the last five minutes that you're beautiful?"

RONAR disengaged his attention again. He found human love-making as repulsive as most human food.

He picked up a few more whispers. And then Dr. Cabanis came in.

The good doctor looked around, smiled, greeted several ladies of his acquaintance as if he were witnessing a private strip-tease of their souls, and then came directly up to the platform. "How are you, Ronar?"

"Fine, Doctor. Are you here to keep an eye on me?"

"I hardly think that's neces-

sary. I have an interest in the results of the judging. My wife has baked a cake."

"I had no idea that cake-baking was so popular a human avocation."

"Anything that requires skill is sure to become popular among us. By the way, Ronar, I hope you don't feel hurt."

"Hurt, Doctor? What do you mean?"

"Come now, you understand me well enough. These people still don't trust you. I can tell by the way they keep their distance."

"I take human frailty into account, Doctor. Frailty, and lack of opportunity. These men and women haven't had the opportunity for extensive psychological treatment that I've had. I don't expect too much of them."

"You've scored a point there, Ronar."

"Isn't there something that can be done for them, Doctor? Some treatment that it would be legal to give them?"

"It would have to be voluntary. You see, Ronar, you were considered only an animal, and treatment was necessary to save your life. But these people are supposed to have rights. One of their rights is to be left alone with their infirmities. Besides, none of them are seriously ill. They hurt no one."

For a second Ronar had a hu-

man temptation. It was on the tip of his tongue to say, "Your wife too, Doctor? People wonder how you stand her." But he resisted it. He had resisted more serious temptations.

A GONG sounded gently but pervasively. Dr. Cabanis said, "I hope you have no resentment against me at this stage of the game, Ronar. I'd hate to have my wife lose the prize because the judge was prejudiced."

"Have no fear, Doctor. I take professional pride in my work. I will choose only the best."

"Of course, the fact that the cakes are numbered and not signed with the names of their creators will make things simpler."

"That would matter with human judges. It does not affect me."

Another gong sounded, more loudly this time. Gradually the conversation stopped. A man in a full dress suit, with yellow stripes down the sides of his shorts, and tails hanging both front and rear, climbed up on the platform. His eyes shone with a greeting so warm that the fear was almost completely hidden. "How are you, Ronar? Glad to see you."

"I'm fine, Senator. And you?"

"Couldn't be better. Have a cigar."

"No, thank you. I don't smoke."

"That's right, you don't. Besides, I'd be wasting the cigar. You don't vote!" He laughed heartily.

"I understand that they're passing a special law to let—people—like me vote at the next election."

"I'm for it, Ronar, I'm for it. You can count on me."

The chairman came up on the platform, a stout and dignified woman who smiled at both Ronar and the Senator, and shook hands with both without showing signs of distaste for either. The assembled competitors and spectators took seats.

The chairman cleared her throat. "Ladies and gentlemen, let us open this meeting by singing the *Hymn of All Planets*."

THEY all rose, Ronar with them. His voice wasn't too well adapted to singing, but neither, it seemed, were most of the human voices. And, at least, he knew all the words.

The chairman proceeded to greet the gathering formally, in the name of the Presiding Committee.

Then she introduced Senator Whitten. She referred archly to the fact that the Senator had long since reached the age of indiscretion and had so far escaped mar-

riage. He was an enemy of the female sex, but they'd let him speak to them anyway.

Senator Whitten just as archly took up the challenge. He had escaped more by good luck—if you could call it good—than by good management. But he was sure that if he had ever had the fortune to encounter some of the beautiful ladies here this fine day, and to taste the products of their splendid cooking and baking, he would long since have committed polygamy.

Senator Whitten then launched into a paean of praise for the ancient art of preparing food.

Ronar's attention wandered. So did that of a good part of the audience. His ears picked up another conversation, this time whispered between a man and a woman in the front row.

The man said, "I should have put your name on it, instead of mine."

"That would have been silly. All my friends know that I can't bake. And it would look so strange if I won."

"It'll look stranger if I win. I can imagine what the boys in the shop will say."

"Oh, the boys in the shop are stupid. What's so unmanly in being able to cook and bake?"

"I'm not anxious for the news to get around."

"Some of the best chefs have been men."

"I'm not a chef."

"Stop worrying." There was exasperation in the force of her whisper. "You won't win anyway."

"I don't know. Sheila—"

"What?"

"If I win, will you explain to everybody how manly I really am? Will you be my character witness?"

She repressed a giggle.

"If you won't help me, I'll have to go around giving proof myself."

"Shh, someone will hear you."

Senator Whitten went on and on.

**R**ONAR thought back to the time when he had wandered over the surface of this, his native satellite. He no longer had the old desires, the old appetites. Only the faintest of ghosts still persisted, ghosts with no power to do harm. But he could remember the old feeling of pleasure, the delight of sinking his teeth into an animal he had brought down himself, the savage joy of gulping the tasty flesh. He didn't eat raw meat any more; he didn't eat meat at all. He had been conditioned against it. He was now half vegetarian, half synthetarian. His meals were nourishing, healthful, and a part of his life

he would rather not think about.

He took no real pleasure in the tasting of the cakes and other delicacies that born human beings favored. His sense of taste had remained keen only to the advantage of others. To himself it was a tantalizing mockery.

Senator Whitten's voice came to a sudden stop. There was applause. The Senator sat down; the chairman stood up. The time for the judging had arrived.

They set out the cakes—more than a hundred of them, topped by icings of all colors and all flavors. The chairman introduced Ronar and lauded both his impartiality and the keenness of his sense of taste.

They had a judging card ready. Slowly, Ronar began to go down the line.

They might just as well have signed each cake with its maker's name. As he lifted a portion of each to his mouth, he could hear the quick intake of breath from the woman who had baked it, could catch the whispered warning from her companion. There were few secrets they could keep from him.

At first they all watched intently. When he had reached the fifth cake, however, a hand went up in the audience. "Madam Chairman!"

"Please, ladies, let us not interrupt the judging."

"But I don't think the judging is right. Mr. Ronar tastes hardly more than a crumb of each!"

"A minimum of three crumbs," Ronar corrected her. "One from the body of the cake, one from the icing, and an additional crumb from each filling between layers."

"But you can't judge a cake that way! You have to eat it, take a whole mouthful—"

"Please, madam, permit me to explain. A crumb is all I need. I can analyze the contents of the cake sufficiently well from that. Let me take for instance Cake Number 4, made from an excellent recipe, well baked, Martian granis flour, goover eggs, tingan-flavored salt, a trace of Venusian orange spice, synthetic shortening of the best quality. The icing is excellent, made with rare dipentose sugars which give it a delightful flavor. Unfortunately, however, the cake will not win first prize."

An anguished cry rose from the audience. "Why?"

"Through no fault of your own, dear lady. The parberries used in making the filling were not freshly picked. They have the characteristic flavor of refrigeration."

"The manager of the store swore to me that they were fresh! Oh, I'll kill him, I'll murder him—"

She broke down in a flood of tears.

RONAR said to the lady who had protested, "I trust, madam, that you will now have slightly greater confidence in my judgment."

She blushed and subsided.

Ronar went on with the testing. Ninety per cent of the cakes he was able to discard at once, from some fault in the raw materials used or in the method of baking. Eleven cakes survived the first elimination contest.

He went over them again, more slowly this time. When he had completed the second round of tests, only three were left. Number 17 belonged to Mrs. Cabanis. Number 43 had been made by the man who argued with his wife. Number 64 was the product of the young bride, whom he had still not seen.

Ronar paused. "My sense of taste is somewhat fatigued. I shall have to ask for a short recess before proceeding further."

There was a sigh from the audience. The tension was not released, it was merely relaxed for a short interval.

Ronar said to the chairman, "I should like a few moments of fresh air. That will restore me. Do you mind?"

"Of course not, Mr. Ronar."

He went outside. Seen through the thin layer of air which surrounded the group of buildings, and the plastic bubble which kept

the air from escaping into space, the stars were brilliant and peaceful. The Sun, far away, was like a father star who was too kind to obliterate his children. Strange, he thought, to recall that this was his native satellite. A few years ago it had been a different world. As for himself, he could live just as well outside the bubble as in it, as well in rarefied air as in dense. Suppose he were to tear a hole in the plastic—

Forbidden thoughts. He checked himself, and concentrated on the three cakes and the three contestants.

"You aren't supposed to let personal feelings interfere. You aren't even supposed to know who baked those cakes. But you know, all right. And you can't keep personal feelings from influencing your judgment.

"Any one of the cakes is good enough to win. Choose whichever you please, and no one will have a right to criticize. To which are you going to award the prize?"

"Number 17? Mrs. Cubanis is, as one of the other women has so aptly termed her, a hitch on wheels. If she wins, she'll be insufferable. And she'll probably make her husband suffer. Not that he doesn't deserve it. Still, he thought he was doing me a favor. Will I be doing him a favor if I have his wife win?"

"Number 64, now, is insuffer-

able in her own right. That loving conversation with her husband would probably disgust even human ears. On the other hand, there is this to be said for her winning, it will make the other women furious. To think that a young snip, just married, without real experience in home-making, should walk away with a prize of this kind!

"Ah, but if the idea is to burn them up, why not give the prize to Number 43? They'd be ready to drop dead with chagrin. To think that a mere man should beat them at their own specialty! They'd never be able to hold their heads up again. The man wouldn't feel too happy about it, either. Yes, if it's a matter of getting back at these humans for the things they've done to me, if it's a question of showing them what I really think of them, Number 43 should get it.

"On the other hand, I'm supposed to be a model of fairness. That's why I got the job in the first place. Remember, Ronar? Come on, let's go in and try tasting them again. Eat a mouthful of each cake, much as you hate the stuff. Choose the best on its merits."

THEY were babbling when he walked in, but the babbling stopped quickly. The chairman said, "Are we ready, Mr. Ronar?"



"All ready."

The three cakes were placed before him. Slowly he took a mouthful of Number 17. Slowly he chewed it and swallowed it. Number 43 followed, then Number 64.

After the third mouthful, he stood lost in thought. One was practically as good as another. He could still choose which he pleased.

The assemblage had quieted down. Only the people most concerned whispered nervously.

Mrs. Cabanis, to her psychologist husband: "If I don't win, it'll be your fault. I'll pay you back for this."

The good doctor's fault? Yes, you could figure it that way if you wanted to. If not for Dr. Cabanis, Ronar wouldn't be the judge. If Ronar weren't the judge, Mrs. C. would win, she thought. Hence it was all her husband's fault. Q.E.D.

The male baker to his wife: "If he gives the prize to me, I'll brain him. I should never have entered this."

"It's too late to worry now."

"I could yell 'Fire'," he whispered hopefully. "I could create a panic that would empty the hall. And then I'd destroy my cake."

"Don't be foolish. And stop whispering."

The young post-honeymooning husband: "You're going to win, dear; I can feel it in my bones."

"Oh, Greg, please don't try to fool me. I've resigned myself to losing."

"You won't lose."

"I'm afraid. Put your arm around me, Greg. Hold me tight. Will you still love me if I lose?"

"Mmmm." He kissed her shoulder. "You know, I didn't fall in love with you for your cooking, sweetheart. You don't have to bake any cakes for me. You're good enough to eat yourself."

"He's right," thought Ronar, as he stared at her. "The man's right. Not in the way he means, but he's right." And suddenly, for one second of decision, Ronar's entire past seemed to flash through his mind.

The young bride never knew why she won first prize.

—WILLIAM MORRISON

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# For Your Information

By WILLY LEY

## EARTH TUNNELS

I AM reasonably sure that most of my readers have never come across the name of Maupertuis. If you want to remedy this in a hurry, just reach for an encyclopedia—you'll find him listed as "Maupertuis, Pierre Louis Moreau de, (1698-1759), French mathematician

and astronomer."

You'll find some remarks about his life, too: that his king (Louis XV) sent him to Lapland to measure the length of a degree of the meridian, and that he quarreled with Voltaire—as who didn't?—and was an able mathematician. Also it is stated that he was the author of a number of works such as *Sur la figure de la terre*, *Lettre sur la comète de 1742*, and *Astronomie nautique*.

All of which may tend to make you feel that Monsieur de Maupertuis may have been an important scientist in his time but not worth much type nowadays, beyond an entry in the encyclopedia.

**B**UT that is merely due to the fact that reference books often omit the really interesting things about people. Perhaps Maupertuis was excessively vain (at least all his contemporaries said that he was), and perhaps he was just a shade more quarrelsome than the other learned men of his time—but he was also full of amusing ideas and never hesitated to talk about them.

When, for example, his compatriot and contemporary George Louis Leclerc, Comte de Buffon, speculated about *Terra australis incognita*, the "Great Unknown Southland" which was then supposed to exist somewhere

in the South Seas, Maupertuis jumped in without hesitation.

Buffon, in his speculations, had drawn a parallel to South America. Coming from the Atlantic Ocean, he said, one first encounters the South American lowlands, inhabited by primitive tribes—but farther inland, where the mountains tower toward the sky, there was an area where there had been a high culture with magnificent architecture. Similarly, in the South Seas, we had found only the low islands, inhabited by primitive peoples. So when we finally managed to penetrate to the hypothetical Southland—which was assumed to have tall mountains too—we'd probably find another strange and so far completely unknown culture.

Maupertuis agreed with Buffon so far as the idea of an unknown southern continent was concerned. He also subscribed to the assumption of high mountains in the unknown Southland for the simple (and to us surprising) reason that it was not at that time known how an iceberg is formed: it was thought that icebergs formed in rivers only—hence there had to be enormous rivers to produce the icebergs which had been seen. And the large rivers, in turn, demanded high mountain ranges to supply them.

But there Buffon and Maupertuis parted company. Maupertuis did not expect to find a high culture in the Southland—or any culture at all! The culture of the Andes was high, he admitted, but from there on things went downhill. The islands in the Pacific had a lower and lower culture the farther one went, so obviously none was left for Southland itself—its inhabitants probably still had tails! All this was proclaimed, without any unnecessary hesitation, at Castle Sanssouci near Potsdam, at the dinner table of Frederic the Great.

Many years later, French and German explorers might add deadpan to their reports that the natives were tailless . . . to the puzzlement of readers who did not know just what this was about.

**M**Y MAIN reason for telling about Maupertuis, though, is that he is the father of an idea which has been repeatedly used in science fiction. He "invented" the tube through the center of the earth.

Just what would happen if one had a truly bottomless well?

Maupertuis was, as has been said, an excellent mathematician. He was also one of the men of science who accepted Sir Isaac Newton's teachings wholeheartedly. The problem of the bottom-

less well became an exercise in mathematics.

Obviously, if you fell into such a well, you'd fall faster and faster until you reached the center of the Earth. But you would not stop there, of course, for by that time you would have acquired a considerable speed, and would continue to "fall upward" through the remaining half of the well. Gravitation would slow you down to zero at the precise point of reaching the surface at the other end of the bottomless well—and your assistant at the other end could yank you sideways onto solid ground, before you had time to start falling again. The trip—and the trip back, if you had no assistant—would take 84 minutes and 22 seconds. The speed would be highest at the Earth's center, where it would be (expressed in our measurements) five miles per second.

Of course, the bottomless well would have to be evacuated, so that the traveler would not be slowed down by air resistance. And the whole thing would work even better only if one first stopped the rotation of the Earth, for lacking that, one would have to dig the well from pole to pole.

But in the pole-to-pole connection itself there is some hidden trouble: the area of the South Pole is about one mile above sea

level, while the area of the North Pole is virtually at sea level. So if you try it from north to south, you don't quite reach the other end, which is one mile above your farthest point. And if you go from south to north, you reach north polar sea level with enough residual velocity to rise one mile into the thin air!

So you might spend some time in such a tunnel . . .

Just about half a century ago, a Russian writer by the name of A. A. Rodnych (who later acquired fame as a historian of aviation) demonstrated that Maupertuis, and after him Camille Flammarion, had failed to extract *all* the humor from the idea. There was still a trick left—and Rodnych described it under the title: *Subterranean self-propelled railroad between St. Petersburg and Moscow; Fantastic Novel, for the Present in only three and moreover incomplete chapters.*

The point was very simple: there are no straight tunnels. If there were, you would not need fuel.

Suppose a perfectly straight tunnel were built from Kansas City to San Francisco—straight enough to look through, even though you might need a telescope to make out the light from the other end. This tunnel would be straight, but not hori-

zontal: its center would be closer to the center of the Earth than its two ends. Hence, from whichever end you enter, you go down. A railroad car on a track through the tunnel, with its brakes released, would begin to roll. Just as in the bottomless well, the speed would increase and increase until the center of the tunnel was reached, at which point the direction would be "up" and the speed would begin to decrease. And if there were no friction in the bearings and on the rails, and no air resistance (and also if the wheels could stand the speed near the center without being torn apart by centrifugal force), the railroad car would reach the other end of the tunnel with zero speed and without having used a drop of fuel. Provided, of course, that both tunnel mouths are the same distance from the center of the Earth, i.e. same elevation above sea level.

The timetable for such a railroad would not pose any problems: each and every train would arrive at its destination precisely 42 minutes and 11 seconds after its brakes had been released at the other end . . . whether the tunnel was 1000 miles or a mere 100 miles long.

SINCE we are talking about gravity, let's consider the case of the young man whose chair

simply moved across the polished hardwood floor until it was next to that of the beautiful brunette—and who explained it by “attraction” and blamed it all on Sir Isaac Newton.

Since I happened to be around, I was called upon to testify that Newton actually had said that each particle of matter in the Universe attracts every other particle. True, he did say that . . . but if I had been the young lady, I would have protested bitterly at the implication that I weighed several times as much as Mt. Everest.

Seriously: some people do wonder why the law of universal gravitation is not noticeable in daily life. Science says that all bodies attract each other, but most of the time it certainly doesn't look that way. On the other hand, when two ships collide in a fog there are always some people who believe that Newton's law was responsible. To get the matter straight, we obviously need some figures:

If we have two pieces of matter, each weighing one gram, and they are one centimeter apart, what is the attraction between them?

Answer: about  $1/15,000,000$  milligram.

One milligram, of course, is the thousandth part of a gram, and there are 28 grams in an

ounce. If one of the two pieces of matter weighed 5 grams and the other 8 grams—and they were still one centimeter apart—their mutual attraction would be  $5 \times 8$  or 40 times as large as that of the two one gram pieces. But if they were three centimeters apart, you'd have to divide the attraction over the standard distance by 9 to get the proper figure.

A nice big orange weighs about 200 grams; two of them almost make a pound, since a pound is equivalent to 450 grams. If we place two such oranges ten centimeters or just about four inches apart, their mutual attraction then is  $200 \times 200 = 40,000$  divided by 10 times 10, which gives 400 as the result. This result has to be multiplied by  $1/15,000,000$ , the final result being  $4/150,000$  or not quite  $1/40,000$  milligrams. This, quite evidently, is far too little to be noticeable or even measurable.

As for the young man and the beautiful brunette, their mutual gravitational attraction must have been about 0.03 milligrams if they were originally 100 centimeters (about forty inches) apart. But the friction of the chair on even the best polished hardwood floor must have been well over twenty pounds—so I'm afraid we must assume that some other kind of attraction was re-

sponsible for that particular phenomenon.

How about something that is really heavy, though—say a middle-sized ocean liner of 25,000 tons weight?

Since ocean liners as a rule avoid close contact, we'll say that they float 100,000 centimeters (6/10th of a mile) apart. Making the same calculation as before, which is multiplying their weights in grams, divided by the square of their distance in centimeters and multiplied by the constant for one gram at one centimeter, we find that the liners would attract each other with a force of 4.2 grams. Even if they were only a hundred yards apart, the attraction would amount to just about one pound—hardly enough to move a ship. So when two ships collide in a fog, it just means that they happened to be on a collision course.

The figures show why the mutual gravitational attraction of masses does not show in daily life. It becomes important only if one of them is of planetary size—for example when the man on a slippery floor is attracted by the Earth.

### MORE PRIME NUMBERS

NO other item in my column has brought in such a large volume of mail as my piece on

prime numbers in the June 1953 GALAXY. Since more than a score of letters and postcards—22, by actual count, at the moment of writing—queried the expression on p. 70, I'll begin the discussion with that.

Of course, as eleven correspondents stated or at least suspected, Fermat's expression suffered from a typographical error. The exponent of the "2" is not  $2n$  but  $2^n$ , so that the expression reads correctly

$$2^{(2^n)}$$

The five readers who amiably called me a bungler and ignoramus will please air their grievance with the typesetter; my copy was correct, and I have a carbon copy of the article to prove it.

Another twelve letters dealt with a fact beyond my control, but one which I also regret. About a month after my article was written, the NBSINA (National Bureau of Standards Institute for Numerical Analysis) on the premises of UCLA (University of California, Los Angeles) announced that SWAC (Standards Western Automatic Computer) had established higher Mersenne primes than the famous  $2^{127} - 1$ . The list of higher Mersenne primes reads as follows:



$$\begin{aligned}
2^{121} &= 1 \\
2^{607} &= 1 \\
2^{1279} &= 1 \\
2^{2033} &= 1 \\
2^{2281} &= 1
\end{aligned}$$

One Canadian reader thought that he had found a proof of Goldbach's theorem. His reasoning was as follows: disregarding the 2, which is the only even prime, a prime number must of necessity be an even number plus one:  $P = E + 1$ . Hence, if you add two primes  $p_1$  and  $p_2$  you really add  $E_1 + E_2 + 2$  which obviously must be an even number since you add three even numbers together.

Now this is proof, if one were needed, that the sum of two primes must be an even number—but this is not what Goldbach said. Goldbach stated that every even number is the sum of two primes, which sounds like the same statement, but actually is not.

To explain the difference, let us assume that Goldbach's theorem is wrong. In that case, there should be at least one even number which is not the sum of two primes but merely the sum of two odd numbers, either of which, or both, are not primes. The proof to be found, therefore, is that there is no even number which cannot be expressed as a sum of two odd numbers both of

which must be primes.

Among the correspondence there were several letters asking me for a list of primes up to certain limits or asking where such a list can be gotten. I don't know whether the list can still be bought, but it should be in any reasonably large public library. Its title is *List of Prime Numbers from 1 to 10,006,721* by D. N. Lehmer; it is a publication of the Carnegie Institution of Washington, Publication Nr. 165, released in 1914. The recent work on the big Mersenne primes can be found in *Mathematical Tables and Aids to Computation*, Vol. 7. p. 72 (1953).

—WILLY LEY

## ANY QUESTIONS?

*Will you please tell me how to determine the acceleration of a rocket if its weight and thrust are known? In space, would the weight of a rocket affect its acceleration in any way?*

Richard Weed

201 Harper Avenue  
Morrisville, Penna.

The formula for determining the acceleration of a rocket is about as simple as a formula can be. It is  $P/W$ , where  $P$  stands for the thrust and  $W$  for the weight. In practical application, however, there are some minor complications which

have to be taken into account, one of which is the direction of the movement.

Let's assume that the rocket has just taken off and is moving vertically upward. We'll say that its weight is 100 lbs. and that its rocket motor develops a thrust of 300 lbs. 300 divided by 100 is, of course, 3—so the rocket's "absolute" acceleration would be 3g.

If this were the whole story, it would mean that the rocket is climbing at 3g (or accelerating 96 feet per second), so that at the end of each second of flight its velocity would be 96 feet per second faster than at the beginning of that second. But (obviously) if the motor were not working, the rocket would fall back—which is to say that the Earth's gravity swallows up one g of the "absolute" acceleration. Hence the "effective" acceleration is 2g, and the formula has to be amended to read  $P/W - 1g$ . The interesting point here is that, if the rocket is manned, the pilot feels the *absolute* acceleration while the speed increases according to the *effective* acceleration.

The "true" effective acceleration is influenced by air resistance, which will vary with the speed of the rocket at a given moment and its altitude

(or more precisely the density of the air at that altitude). As important as that is the fact that the weight of the rocket at the end of that second will be less than the weight at the beginning of the second.

All this applies to empty space too, except that (a) there will be no air resistance, (b) the value for the thrust is about 15 per cent higher than the sea level value of the same rocket motor and (c) at a sufficient distance from the Earth the value for g may be noticeably less than the sea level value. For a height of 250 miles, for example, g has dropped from about 32 ft/sec<sup>2</sup> to 28.5 ft/sec<sup>2</sup>.

*Does a rocket which takes off toward the west have to attain a higher velocity relative to a point on the ground to reach orbital velocity than a rocket headed east?*

William J. Hunt  
2325 NE 32nd Avenue  
Portland 12, Oregon

Let's take this one step by step.

In von Braun's orbit—1075 miles above mean sea level—the rocket will have to have a velocity of 4.4 miles per second. If it has that velocity in the orbit, it doesn't matter whether it goes around the equator heading east or head-

ing west, or along a meridian from pole to pole, or at any odd angle in between.

Repeat: If it has that velocity in the orbit . . . but first it has to acquire this velocity.

For simplicity's sake, let's suppose that take-off is at the equator. The equatorial diameter of the Earth is almost 8000 miles, hence the length of the equator is that figure multiplied by "pi" or, in round figures, 24,000 miles. Since the Earth turns once in 24 hours, a point at the equator moves in an easterly direction at the rate of 1000 miles per hour or about 0.28 miles per second.

So if your rocket heads east it has, relative to the center of the Earth, a speed of 1000 miles per hour before it even starts. If you wanted to head west, you would not only lose that 1000 mph, but you would have to "kill" it first—so that you lose 2000 miles per hour, or around 0.56 miles per second. Half-a-mile a second is a considerable speed, even for a rocket, so take-off in an easterly direction is usually assumed.

*What does the term "Doppelgänger" mean?*

Cpl. D. A. Freeman, USMC  
Fleet Post Office  
San Francisco, Calif.

This is originally a German word, composed of two words each of which is hard to translate—which is, of course, the reason why it was adopted rather than translated.

"Doppel" can mean "twice," and also "double" (the amount) or "duplicate."

"Gänger" is best translated as "walker."

The whole means: "a walking duplicate."

The superstition attached to the word is that some people have such a "duplicate" walking around, and when they meet it face to face they know that they are doomed, with usually only three days of grace left to them. But in everyday German conversation, the term "Doppelgänger" can be and often is used without mystical connotations. A man saying to a friend, "I met your Doppelgänger today," merely means that he met somebody or saw somebody who looked just like his friend.

*Why is the nautical mile longer than the ordinary mile? Is there any relationship between the nautical mile and the metric kilometer? And is there such a thing as a "metric mile"?*

James A. Monahan  
(no street given)  
Chicago, Illinois.

If anybody knows the origin of the English mile, I wish he'd write me, for as far as I know the mile—1760 yards or 5280 feet long—is a unit which just happened.

The nautical mile, however, has a reason; its length is 1/60th of one degree at the equator.

As for the kilometer, it also has a reason: it is 1/10,000th of the distance of a point on the equator from either pole—Or rather it is supposed to be, for more recent measurements have shown a small deviation from that figure.

There is no "metric mile"; but for a while geographers used a unit which they called the "geographic mile," which corresponded to 1/15th of a degree at the equator.

The various "national" miles are as uncertain in origin as the English mile, though some

of them happen to come fairly close to the old geographic mile. To compare them, the kilometer has been used as the unit in the following table:

1 English mile	1.609 km.
1 nautical mile	1.852 km.
1 geographic mile	7.420 km.
1 German mile	7.500 km.
1 Danish mile	7.582 km.
1 Swedish mile	10.688 km.
1 Norwegian mile	11.295 km.

The Russian *verst* measured 1.066 kilometers (or 0.6629 miles), but like all the other old miles given, it is now obsolete. The only units in use internationally now are the kilometer, the English mile, and the nautical mile; but the French nautical mile is three times as long as the nautical mile of everybody else. Don't ask me why.

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# the carnivore

By G. A. MORRIS

*Why were they apologetic? It wasn't their fault that they came to Earth much too late.*

THE beings stood around my bed in airsuits like ski-suits, with globes over their heads like upside-down fishbowls. It was all like a masquerade, with odd costumes and funny masks.

I know that the masks are their faces, but I argue with them and find I think as if I am arguing with humans behind the masks. They are people. I recognize people and whether I am

going to like this person or that person by something in the way they move and how they get excited when they talk; and I know that I like these people in a motherly sort of way. You have to feel motherly toward them, I guess.

They all remind me of Ronny, a medical student I knew once. He was small and round and eager. You had to like him, but you couldn't take him very seriously. He was a pacifist; he wrote poetry and pulled it out to read aloud at ill-timed moments; and he stuttered when he talked too fast.

Illustrated by BURCHARD

They are like that, all fright and gentleness.

I am not the only survivor — they have explained that — but I am the first they found, and the least damaged, the one they have chosen to represent the human race to them. They stand around my bed and answer questions, and are nice to me when I argue with them.

All in a group they look halfway between a delegation of nations and an ark, one of each, big and small, thick and thin, four arms or wings, all shapes and colors in fur and skin and feathers.

I can picture them in their UN of the Universe, making speeches in their different languages, listening patiently without understanding each other's different problems, boring each other and being too polite to yawn.

They are polite, so polite I almost feel they are afraid of me, and I want to reassure them.

But I talk as if I were angry. I can't help it, because if things had only been a little different . . . "Why couldn't you have come sooner? Why couldn't you have tried to stop it before it happened, or at least come sooner, afterward . . .?"

If they had come sooner to where the workers of the Nevada

power pile starved slowly behind their protecting walls of lead — if they had looked sooner for survivors of the dust with which the nations of the world had slain each other — George Craig would be alive. He died before they came. He was my co-worker, and I loved him.

We had gone down together, passing door by door the automatic safeguards of the plant, which were supposed to protect the people on the outside from the radioactive danger from the inside — but the danger of a failure of politics was far more real than the danger of failure in the science of the power pile, and that had not been calculated by the builders. We were far underground when the first radioactivity in the air outside had shut all the heavy, lead-shielded automatic doors between us and the outside.

We were safe. And we starved there.

"Why didn't you come sooner?" I wonder if they know or guess how I feel. My questions are not questions, but I have to ask them. He is dead. I don't mean to reproach them — they look well meaning and kindly — but I feel as if, somehow, knowing why it happened could make it stop, could let me turn the clock back and make it happen differently. If I could have signaled them, so

they would have come just a little sooner.

They look at one another, turning their funny-face heads uneasily, moving back and forth, but no one will answer.

The world is dead . . . George is dead, that thin, pathetic creature with the bones showing through his skin that he was when we sat still at the last with our hands touching, thinking there were people outside who had forgotten us, hoping they would remember. We didn't guess that the world was dead, blanketed in radiating dust outside. Politics had killed it.

These beings around me, they had been watching, seeing what was going to happen to our world, listening to our radios from their small settlements on the other planets of the Solar System. They had seen the doom of war coming. They represented stellar civilizations of great power and technology, and with populations that would have made ours seem a small village; they were stronger than we were, and yet they had done nothing.

"Why didn't you stop us? You could have stopped us."

**A** RABBITY one who is closer than the others backs away, gesturing politely that he is giving room for someone else to speak, but he looks guilty and

will not look at me with his big round eyes. I still feel weak and dizzy. It is hard to think, but I feel as if they are hiding a secret.

A doelike one hesitates and comes closer to my bed. "We discussed it . . . we voted . . ." It talks through a microphone in its helmet with a soft lisping accent that I think comes from the shape of its mouth. It has a muzzle and very soft, dainty, long nibbling lips like a deer that nibbles on twigs and buds.

"We were afraid," adds one who looks like a bear.

"To us the future was very terrible," says one who looks as if it might have descended from some sort of large bird like a penguin. "So much — Your weapons were very terrible."

Now they all talk at once, crowding about my bed, apologizing. "So much killing. It hurt to know about. But your people didn't seem to mind."

"We were afraid."

"And in your fiction," the doe-like one lisped, "I saw plays from your amusement machines which said that the discovery of beings in space would save you from war, not because you would let us bring friendship and teach peace, but because the human race would unite in hatred of the outsiders. They would forget their hatred of each other only in a new and more terrible war with

us." Its voice breaks in a squeak and it turns its face away from me.

"You were about to come out into space. We were wondering how to hide!" That is a quick-talking one, as small as a child. He looks as if he might have descended from a bat — gray silken fur on his pointed face, big night-seeing eyes, and big sensitive ears, with a humped shape on the back of his airsuit which might be folded wings. "We were trying to conceal where we had built, so that humans would not guess we were near and look for us."

They are ashamed of their fear, for because of it they broke all the kindly laws of their civilizations, restrained all the pity and gentleness I see in them, and let us destroy ourselves.

I am beginning to feel more awake and to see more clearly. And I am beginning to feel sorry for them, for I can see why they are afraid.

They are herbivores. I remember the meaning of shapes. In the paths of evolution there are grass eaters and berry eaters and root diggers. Each has its functional shape of face and neck — and its wide, startled-looking eyes to see and run away from the hunters. In all their racial history they have never killed to eat. They have been killed and eaten, or

run away, and they evolved to intelligence by selection. Those lived who succeeded in running away from carnivores like lions, hawks, and men.

I look up, and they turn their eyes and heads in quick embarrassed motion, not meeting my eye. The rabbit-like one is nearest and I reach out to touch him, pleased because I am growing strong enough now to move my arms. He looks at me and I ask the question: "Are there any carnivores—flesh eaters—among you?"

He hesitates, moving his lips as if searching for tactful words. "We have never found any that were civilized. We have frequently found them in caves and tents fighting each other. Sometimes we find them fighting each other with the ruins of cities around them, but they are always savages."

The bearlike one said heavily, "It might be that carnivores evolve more rapidly and tend toward intelligence more often, for we find radioactive planets without life, and places like the place you call your asteroid belt, where a planet should be — but there are only scattered fragments of planet, pieces that look as if a planet had been blown apart. We think that usually . . ." He looked at me uncertainly, beginning to





fumble his words. "We think . . ."

"Yours is the only carnivorous race we have found that was — civilized, that had a science and was going to come out into space," the doelike one interrupted softly. "We were afraid."

They seem to be apologizing.

The rabbit one, who seems to be chosen as the leader in speaking to me, says, "We will give you anything you want. Anything we are able to give you."

They mean it. We survivors will be privileged people, with a key to all the cities, everything free. Their sincerity is wonderful, but puzzling. Are they trying to atone for the thing they feel was a crime; that they allowed humanity to murder itself, and lost to the Galaxy the richness of a race? Is this why they are so generous?

Perhaps then they will help the race to get started again. The records are not lost. The few survivors can eventually repopulate Earth. Under the tutelage of these peaceable races, without the stress of division into nations, we will flower as a race. No children of mine to the furthest descendant will ever make war again. This much of a lesson we have learned.

These timid beings do not realize how much humanity has wanted peace. They do not know how reluctantly we were forced and trapped by old institutions

and warped tangles of politics to which we could see no answer. We are not naturally savage. We are not savage when approached as individuals. Perhaps they know this, but are afraid anyhow, instinctive fear rising up from the blood of their hunted, frightened forebears.

THE human race will be a good partner to these races. Even recovering from starvation as I am, I can feel in myself an energy they do not have. The savage in me and my race is a creative thing, for in those who have been educated as I was it is a controlled savagery which attacks and destroys only problems and obstacles, never people. Any human raised outside of the political traditions that the race inherited from its bloodstained childhood would be as friendly and ready for friendship as I am toward these beings. I could never hurt these pleasant, overgrown bunnies and squirrels.

"We will do everything we can to make up for . . . we will try to help," says the bunny, stumbling over the English, but civilized and cordial and kind.

I sit up suddenly, reaching out impulsively to shake his hand. Suddenly frightened he leaps back. All of them step back, glancing behind them as though making sure of the avenue of

escape. Their big luminous eyes widen and glance rapidly from me to the doors, frightened.

They must think I am about to leap out of bed and pounce on them and eat them. I am about to laugh and reassure them, about to say that all I want from them is friendship, when I feel a twinge in my abdomen from the sudden motion. I touch it with one hand under the bedclothes.

There is the scar of an incision there, almost healed. An operation. The weakness I am recovering from is more than the weakness of starvation.

For only half a second I do not understand; then I see why they looked ashamed.

They voted the murder of a race.

All the human survivors found have been made sterile. There will be no more humans after we die.

I am frozen, one hand still extended to grasp the hand of the rabbitly one, my eyes still searching his expression, reassuring words still half formed.

There will be time for anger or grief later, for now, in this instant, I can understand. They are probably quite right.

We were carnivores.

I know, because, at this moment of hatred, I could kill them all.

—G. A. MORRIS

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(Cont. from page 2)

take over Earth. Even when they are pointed out, they arouse skepticism. But don't you see? *They're meant to!*

Paper clips, rubber bands, strings, pencils, glue, all the deliberately trivial rest . . .

Huge industries, employing thousands of people, turning out countless clips, hangers, pencils, miles of string . . .

Paying wages and taxes . . .

*And nobody buys the products!*

But somebody must. We all have them and they aren't gifts of the manufacturers, or there would be no wages and taxes.

The Russians? No, they have them, too, and so must also be potential—what? Victims?

There is but one answer:

*Extraterrestrials!*

They—or their human agents or dupes—are cleverly supplying us all with these safe-seeming tools of conquest.

How will the plan work? See for yourself.

- The items are all genuine; many of them even carry the Good Housekeeping seal of approval.

- They may or may not have been invented by aliens, but that's not the point now—the industries are kept going by alien funds.

- Step by step, we have been made increasingly dependent on

these products, so dependent that even the most skeptical must blanch at this prospect:

*What would happen if everyone who needed a paper clip, rubber band, pencil, string or mucilage suddenly could not find any?*

Documents strewn around for lack of clips or rubber bands; parcels unwrapped because there is no paper or string; nothing pasted or glued together; orders and notes left unwritten . . .

Now do you see the brilliant simplicity of the scheme?

*Withdraw these items abruptly and the armies of the world cannot march, the governments will fall apart, civilian populations will be unable to pack up and escape.*

Disintegration rays, atomic bombs, suicide ships from space with hydrogen warheads—

There are defenses against such overt weapons.

But what defense is there for a world suddenly deprived of pencils and nails, string and glue and wrapping paper?

*We could buy our own and smash the conspiracy.*

As a solution, it's too drastic—it violates the human instinct of collecting junk for possible emergency.

I hope somebody has a better answer.

—H. L. GOLD

# Origins

## of Galactic Etiquette

By EDWARD WELLEN

Illustrated by STONE

Take this handy guide along  
on your Galactic jaunts—to  
avoid death—or even worse!

### PREFATORY NOTE

**M**AN rippled out through the Galaxy, learning. He was learning—often the hard way—to abandon the set notions of morality that had conditioned him. He was learning that the guiding hand of the past could not reach from star to star. He was learning to evaluate new situations arising out of changed conditions. In sum, he was learning that etiquette varies with environment.

At first, breaches of etiquette were all too common. The trouble they caused resulted largely from twin errors. The offender erred in failing to use his intelligence to determine the proper social expedient; and the one taking offense erred in failing to allow for the blunderer's ignorance.

To reconcile conflicting ways of life—without allowing one to impose its beliefs, shames, and fears upon another—is the Galac-

tic Council's mission. In 1937 the Galactic Council consolidated its counseling services into the Department of Etiquette. It commissioned experts with a background of comparative studies in ecology, sociology, and psychology.

These experts took the generic title of MLE, from the initials of Manners, Logic, Expediency—not, as many think, from Emily Post, a probably mythical authority on Terran etiquette.

The following examples of Galactic etiquette are a cross-section of MLE-ing in its formative stage.

FROM the microfiles of MLE Zel Pret (2916-3040), dean of the Derben XI MLEs.

Question: Three years ago a friend of mine disappeared. He had been working on a self-popping cereal when it exploded. He left no trace and so we held mourning rites over the spot we believed he had last occupied.

Six months ago he reappeared. But, naturally, until he goes through the birth ceremony, we must religiously follow the custom of "not seeing" him.

He is taking unfair advantage of his "invisibility." Judging by his mischief-making, I suspect that he staged the explosion to cover his leaving—and I shudder to think of what he must have

done during those missing years.

Now he walks right into our houses, helps himself to our best liquor, snatches food from our grasp, and pinches our wives. And he caps these indignities by tying our eye-stalks into neat bows, turning our "unseeing" eyes upon ourselves.

What do you advise?

Fit-to-be-tied.

Answer: You have a knotty problem, Fit-to-be-tied. To see how to cut the knot, simply follow the lesson you learn from the following example.

Aluaded Anstef (2613-2709), a Prubnild III feather magnate who sculpted for a hobby, taught his son Rusica to believe in his philosophy, which held that the



mind never can gather facts enough to be sure that one course of action is wiser than another—that what now seems good may in the long run prove bad.

One day in 2679 Alusded stood on a high scaffold in his studio. He was absorbedly putting the finishing touches to a colossal statue. He stepped back to admire his work. He fell.

The sudden stop didn't kill him . . . as he belonged to a metallic race, it merely dented him. Shakily, he grasped the scaffolding to pull himself upright. The scaffolding toppled. It struck the top of his head. Again his iron constitution saved his life—but as he happened to be slanting in the right position relative to the magnetic lines of force of the planet, the blow permanently magnetized him.

HE lay dazed for a while. Then his head cleared and he started to get up. His heart banged when he found himself stuck to the steel flooring. He strained, but couldn't pry himself loose. He needed help, and called out.

He grimaced at the undignified sight he presented, but welcomed the ring of his son Rusica's footsteps. Somewhat bad-temperedly, he explained what had happened.

Rusica stood watching his father thoughtfully. Then he

slowly reflected aloud.

"Analyzing the situation," he said, "I must weigh my desires and good intentions against unforeseeable effects."

By now, adding to Alusded's embarrassment, a group of his friends had gathered. They listened—some impatiently, some amusedly—to Rusica's careful reasoning.

At last, Rusica made up his mind. Taking the long view, he found himself unable to judge whether he would harm or help his father and/or society by acting—and so, uncertain that good would come of freeing his father from the floor, he went out.

Less philosophical, three of Alusded's friends came closer to take hold of the fallen magnate. Three clangs echoed through the room—and the three friends were sticking to Alusded.

The remaining friends wisely used ropes to tug loose and sort out the quartet. Alusded gratefully wanted to shake hands with his rescuers, but they moved out of reach, wary of his personal magnetism. They suggested that he undergo heat, and so lose his drawing power.

Among themselves they muttered about Rusica's unfilial conduct. But Alusded, proud that his teachings had taken, resoundingly praised Rusica for sticking to them.

Now, Fit-to-be-tied, you and I know that Alusded was rationalizing a defeat. His case shows how a stern doctrine may boomerang. Your problem will answer itself, I believe, when your "not seeing" makes you blunder into your friend in ways I leave to your imagination. Of course, I don't counsel that you run him down or through. But after he experiences two or three close calls he will decide to arrange for his rebirth.

**F**ROM the microfiles of MLE Atrata Beritar (2966-3187), Cygnian expert; author of the famous *Melanocoryphic Memoirs*.

**Question:** My neighbor hovers about, making disparaging remarks while I'm bleaching or dyeing my feathers. It's nearly moulting time and I'm afraid she'll want to come along when I shop for falsies. Would it be proper for me to tell her to go preen herself?

Ruffled.

**Answer:** Patience, Ruffled. If your neighbor's kibitzing becomes overly annoying, you may with propriety ask her to desist. However, you'll do well to think of this: there are occasions when it's perfectly correct for one to kibitz.

For example, when a Groom-



bian philosopher seems lost in abstract thought, other Groom-bians deliberately make all manner of distracting sounds and gestures. They do this to remind him of the omnipresence of environment.

Largely speaking, of course, most Galactic societies frown on derogatory kibitzing, because of the totalitarian taint clinging to even such a modified form of spying. But in all societies, constructive kibitzing has become acceptable ever since 2516.

In that year, a scout ship of the University of Capella Expedition crashed in the wilderness of Deneb IX. A twisted beam pinned the scout in the wreckage. Only the thrust of his arms held the



beam from crushing his chest. But his arms soon tired, and the weight of the beam slowly but inexorably settled.

The magnetic storm that had caused the crash made it impossible for the command ship to get a fix on the lost scout. So when the scout failed to return or report, search parties set out on the ground to cover the area from opposite ends.

AS they made their way toward each other, both parties became self-consciously aware of an arboreal creature that flitted back and forth between them. First it would hover over Search Party A, and with bright beady eyes watch the members blasting their way through the brush. Then it would swing back to give its attention to Search Party B.

These bursts of scrutiny were distracting to the Capellans. They were itching to scare off the creature. But respect for all forms of life channeled their energy into the search for the rapidly weakening scout.

After several hours of shuttling, the arboreal being diffidently addressed the members of Search Party B. An alien voice appeared to creep into their thoughts. It said, "Pardon me for intruding upon your minds, but would it be sporting if I were to tell you whether or not you are warm?"

So, Ruffled, you see how one being may be in a position to do others a better turn than anyone imagines. You see how the others may be in a position to deprive themselves of that aid. Fortunately, in this case everything worked out happily. At length, but happily. But you see how easy it is for beings to fail to read each other's purposes.

So try to keep from letting your annoyance with your neighbor's fault-finding open a breach between you. Remember what birds of a feather must do.

FROM the microfiles of MLE Naea Muc (3054-3197), who won fame in the Cymini sector.

Question: I recently had a pleasant visit at the Vernac branch of the Galactic Museum. I saw—and rather fell in love with—an outer garment made of animal pelts. I'd like to synthesize a duplicate of it. Would such a garment be socially acceptable today?

Madcap.

Answer: Stick to non-objective covering, Madcap. Otherwise you violate a long-standing taboo.

This usage traces back to the disappearance of Katherine Roman, Miss Terra of 2403. Among the prizes she won when she gained the title was a mutated-cat coat worth four kilocredits.

She wore it while enjoying another prize, a trip around the Galaxy. She never completed the trip, however, for she disappeared while on a stopover on Tasinack.

The natives of Tasinack are a fur-bearing race. They turned out in honor of Katherine's much-publicized visit in a crowd that spread over the spaceport like a rug. Unfortunately, Katherine's appearance rubbed the nap the wrong way. She stepped out of the spaceship and waved and smiled at the Tasinackians, and while their standards of beauty found Katherine wanting, they were anxious to make her feel welcome and so they had rehearsed spontaneous cheering for days. But when they saw that her coat consisted of pelts very

like their own, their cheers changed to catcalls.

Katherine's chaperone sensed the reason for the resentment and urged her to keep the fur coat out of sight during the stopover. Katherine reluctantly agreed.

When they reached the hostelry, Katherine started to put the coat away, lingering over the packing process. She couldn't resist giving the soft, rich fur one last stroke.

And that undid the effect of her chaperone's urging.

Deaf to all warnings and pleas, Katherine wrapped herself in her fur coat and went out into the streets to do a bit of sightseeing. She didn't return. And no Terran eye ever again saw Miss Terra of 2403 alive.

The natives of Tasinack held contests too. Tasinack's Best-dressed Female of 2404 won the title by sporting a supple jacket of something remarkably like humnoid skin.

That's why I urge you to drop your idea of synthesizing a fur coat, Madcap. Only when you've inherited one is it in good taste for you to wear a fur coat.

**F**ROM the microfiles of MLE Sul Oca (3201-3370), Swind IV expert who also created a stir as a musician.

Question: I've just come back from running a trading post on





Tontowe II. I've come back empty-handed. Sessuly, my competitor, has come back with all his arms full. And I can't understand why.

I remember the shock I felt when I first saw Sessuly acting boorishly. There he stood, in the middle of a horde of bellowing natives. He was nodding and smiling as if he understood what they were bellowing. And all the while he was rudely holding fingers in his ears, shutting out the deafening blast that passes for talk.

I laughed to myself, because I was sure he was taking the wrong tack. It came as a blow when he began reaping a windfall. The natives were storming him with trade goods and leaving

my trading post strictly alone.

For a long time I held to my course of politeness. I couldn't bring myself to veer about and follow Sessuly's example. And I saw my threshold remaining uncrossed and my goods becoming shopworn.

Finally I made up my mind: if rudeness was etiquette on Tontowe II, I would outboor Sessuly. And so, though it scandalized me, I forced myself to make awkward attempts at being rude. I thumbed my tongue and stuck out my nose at the natives. I elbowed and shouldered them aside. I tried to drown them out with a vast bellowing of my own, until my lungs began to leak. But all in vain. My trade goods stayed becalmed on the shelf.

What's the matter? Isn't etiquette what it's puffed up to be? Deflated.

*Answer:* How did you wangle your trading permit? Sessuly had the good sense to bone up on the folkways of Tontowe II. You didn't.

You leaped wrongly when you concluded that Sessuly was being rude.

You remind me of Lene Han (2844-2880), of Lorsa I. While visiting Prah he heard cries of pain that shook him. The cries led him to a hut where a Prah was beating his frail mate bru-

tally. Han rushed in to stop the wife-beater. When he recovered from the wife's flesh-clawing and hair-pulling attack on him, Han found out that the frail wife had wanted the beating because she was frail. Her broken bones would knit beautifully and the callus that formed would strengthen them. This is how the females of Prah become fit for the heavy work they do.

You, too, rushed in. You should have learned that the natives of Tontowe II speak a polyphonic form of double talk. The bellowing you heard was really a combining of two voices, a bass and a treble.

The native uses his bass voice to give his running commentary on long-term space-time factors—climate, social forces, and the like. He uses his treble voice to deal with matters of immediate concern, such as trading.

The bass is—in the ears of a non-Tontower—so loud that it overpowers the treble.

When Sessuly stuck his fingers in his ears he was making practical use of a simple principle: to hear speech above a loud continuous noise, plug your ears.

Buy ear plugs, Deflated, and try Tontowe II again.

**F**ROM the microfiles of MLE Inili Sostota (3274-3386), Seden X expert, who redeemed

himself many times over after failing in this case.

**Question:** My problem becomes more pressing as my spaceship nears your planet. Some five months ago I hastily snapped shut a yawn. I was in the middle of a spaceship that was in the middle of nowhere—and I was hearing meaningful tapping.

I tracked the sound to a porthole. I looked out. I saw nothing but space. The tapping continued. I stepped up the magnification of the porthole—and saw the tappers. They were spores. The tapping told me that inside each thick tough shell was a nucleated mass of thinking protoplasm with a food reserve of starch.

For some time I had been yawning out of boredom, and so I eagerly welcomed company—even if that company was protoplasm that communicated by Galactic Morse. Phrasing their query most politely, they asked me to let them land on my ship. I tapped back a warm welcome.

But as the months dragged along I lost interest in what the spores had on tap to talk about. We really have nothing in common. What's more, they were—and still are—generating their own atmosphere, and are budding and fissioning wildly all over the hull.

I'm concerned. This cluster of space barnacles threatens to im-



pair the efficiency of an aerodynamic landing.

How can I get rid of them now without negating my original welcoming of them?

Host.

Answer: Frankly, Host, I know nothing about the ways of the spores of space. But I hazard the following. When you point out that they are likely to become incandescent along with your spaceship, you will quickly lose your guests.

(Postscript: How unfortunate, Host followed my advice, which I based on insufficient data. Actually, his spaceship had passed through a stream of cosmic dust, resulting in millions of infinitesimal punctures. He was

unaware that the self-sealing walls failed him. Oxygen seeped out. His yawning was due more to oxygen loss than to boredom. Unfortunately, the spores were polite—much too much so to put him in their debt by telling him that they had sensed his danger and had come to plug the holes with themselves. They left for this reason, rather than because they were looking to their own safety. They converted some of their food reserve of starch into explosive and blasted off into deep space. Soon Host began to yawn again.)

FROM the microfiles of MLE Inx Sorgu (3021-3137), distinguished Vegan expert.

Question: I recently lost a valuable ologog. A Cetian found it and graciously returned it. When I gushed my gratitude, the Cetian stomped on my tail and stormed out. What do you think of such barbarity?

Sore.

Answer: Simmer down, Sore. You were at fault. Following this rule should help you in the future: it's better form to express one's thanks to one's benefactor in writing than to do so in person. There are various reasons for this.

Many races become embarrassed at a show of gratitude;



they have merely done their duty. Others are also merely doing their duty, but resent the trouble another's carelessness puts them to. Still others would place a Freudian interpretation upon your losing an object you consciously value; they would consider your effusive thanks evidence of unconscious hypocrisy.

Your Cetan falls into the last-cited category.

On the other hand, gratitude so delights a Scriute that he will filch an object over and over again in order to enjoy the pleasure of returning it.

But perhaps the gravest reason for heeding this rule dates back to Dila Mirg (2519-2667).

To his fellow Achemari, Dila

Mirg was a particularly handsome specimen. To humanoids, however, his appearance was horrifying. Solarians, especially, found the sight of Mirg so chilling that they froze in terror.

The effect on Mirg was just as great—but in his case the effect was one of intense hurt, for he was extremely sensitive to the reaction of others to himself. His only release for the emotional pressure on his wounded ego was to lash out with an eely tentacle. This tentacle was of modified muscular tissue; on excitation through the nervous system, it discharged a powerful electric shock.

**I**N 2602, Mirg in this manner electrocuted a terrified Terran he encountered while the spaceship he astrogated lay docked on Callisto. To escape his angry pursuers, he stowed aboard a Procyon-bound freighter just before it blasted off.

Mirg managed to stay hidden during the early part of the trip. But when he saw Mallory Quayle—Mate and sole Terran in the ship's complement—in danger, Mirg impulsively gave away his presence and risked his life to save Quayle's. From his hiding place Mirg watched Quayle brush against a bare live wire. Instantly, Mirg slithered to the rescue.

He shorted the circuit with his own body.

There was a blinding flash.

Mirg blew out a fuse gland, but his regenerative powers would soon put him on the mend. Quayle suffered nothing worse than facial burns.

Brimming with gratitude, Quayle fumed until he could remove his blindfolding bandages and thank his rescuer face to face.

When the moment came, Quayle hurried to the astrogation room, where Mirg was now working his passage.

As he laid eyes on Mirg, Quayle choked on the words of thanks he had prepared. Terror transfixed him.

Hurt, Mirg lashed out with his tentacle.

Like you, Sore, Quayle neglected to sound his benefactor's depths, neglected to ask about him. If Quayle had known in advance about Mirg's peculiarities and the effect they would have on himself, he would have been prepared. Then he might have averted his eyes while delivering his thanks. He might even have steeled himself to master the ordeal of looking squarely at Mirg. Or, better yet, he might have dropped Mirg a note of thanks, as you should always do in the future.

—EDWARD WEILLEN

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Illustrated by KNOTH

# With a Vengeance

By J. B. WOODLEY

*Keep this in mind in teaching  
apprentices: They are future  
journeyman — and even masters!*

October 10, 2119  
New San Francisco  
**T**ODAY, at precisely 9:50  
a.m., Kyle became First  
Imperator of Terra. His  
coup was so fantastically direct

and facile that I am almost  
tempted to believe that old cliché  
"the time was right."

Well, however badly it can be  
expressed, I suppose the world  
was ripe for this sort of thing. I



can remember when much the same used to happen in elections. One man would win over another by a tremendous majority, and historians would then set about to show how "the time was right."

Why do I persist in tormenting myself with that phrase! Analytically, I might say I resent this new aristocracy of politics. Specifically, I might say I resent Kyle.

And both are true, both are true.

This swing, though, to absolute monarchy, complete with the installation of the Kyle Dynasty—damn him! This is something which psychologists, not historians, must explain. Has the age of the Common Man, so bravely flaunted for over one hundred years, truly come to nothing? Would people really prefer a figurehead and a symbol of undisputed authority?

In this instance, one may again conclude that "the time was right." Contact with planets like Mars and Venus undoubtedly had its influence. I must confess that the televised audiences with the Mrit of Venus and the Znam of Mars *did* make Terra's President—I should say, late President—look a bit seedy. I dare say there is such a thing as a too common Common Man.

Kyle was such, twenty years ago. His name wasn't Kyle then,

although it was something very like that. I must see if any of the old ledgers are about! I'd like to see what the Emperor's name was when His Most Imperial Majesty was an apprenticed nobody!

October 12, 2119

New San Francisco

I FOUND it! Buried in stacks of dust behind the old printing press that was once the heart of my *Beacon-Sentinel*. There were others there too. Spent a delightful morning with them, reading back through those old account books.

I wonder whatever happened to Hastings? And Drew? Best linotype men I ever had. They became pilots, or something, as I recall. Too bad, too bad. They could have had such brilliant futures, both of them. Why they felt they must ally themselves with the non-thinking, muscle-flexing variety of mankind—of which our Ruler is an excellent example—I'll never know.

Ah, yes, Kyle! In those days he was Kilmer Jones. I don't remember him too well, actually, except for the day I fired him.

I suppose he was right in changing his name. We couldn't very well have an Emperor named Kilmer the First, or Jones the First. Much too common, not at all in keeping.

Gawky fellow—that Kilmer. When Bard brought me a sample of his work—I guess I'll have to call it that—we both had a good laugh over it! Atrocious spelling! Couldn't follow the proofreader's marks. Indeed, I wonder if the fellow could even read! The punctuation! And the grammar!

I called the boy to the office that morning—or was it the next day? No matter. I called him in and told him, as kindly as possible, that I thought there were other vocations to which he might be better suited. The irony of it! Kilmer Jones—Kyle I!

And he stood there, I remember, with those seventeen-year-old hands that were all knuckles and bone and chapped skin, twisting those hands and shifting his weight from one foot to the other.

"Please, Mr. Booth," he said, his voice cracking. "I ain't got no other job in mind. I wanna be a newspaper man. I ain't got no—"

If not for that "ain't got no," I think I might have relented. But no one is going to ruin the English language as he did! Not in my offices!

I took him to task severely for his offensive usage, outlined a correct example of what he had attempted to say, gave him a brief lesson in the history of the tongue, and explained why it had been chosen as the official Terran

speech. I think my conclusion was, "You'll be much better off in a position which requires you to quote neither Milton nor Shakespeare nor any author save possibly those who write the comic strips."

"Got no training," he said softly. (I supposed it was to keep his voice from exhibiting its usual adolescent gymnastics.)

I shuddered slightly, I remember. "You mean, 'I have no training.'"

"Yeah . . ." softly again. "Yeah, Mr. Booth."

"Yes!" I cried impatiently. "Not 'yeah,' but yes!"

I searched for his severance pay on my desk, wondering who the devil had hired him in the first place. Gave him three weeks pay, as I recall it, one more than necessary.

Unmannerly pup! He just stood there for a minute and then finally left without even a "Thank you," or "Good-by."

And this is the man who is Kyle the First, Ruler of Terra at the age of thirty-seven! I wonder what he is like now . . .

January 1, 1

New San Francisco

**T**H**E**RE is no longer any need to wonder. Surprisingly few heads have rolled, but apparently Jonesy chooses to exhibit his power in other ways.

Thanksgiving Day, a custom preserved in certain portions of the Directorate of North America, is three weeks away—even though it is January.

The Year One. There used to be some childish joke about the Year One. Don't remember it just now.

Thanksgiving harvest in January. Christmas celebration in February. Spring planting in July! To say nothing of the inconvenience this has caused in my bookkeeping department! I suppose the man will now try to change the weather to suit his new calendar!

January 8, 1

New San Francisco

He can't last! He can't! A dictator is one thing. A monarch is another. But Kyle is something else!

Naturally he had to remove certain persons from his way. And his summer palace in the plains region of America—that's all right, that's all right! An authority of Kyle's stature is expected to remove undesirables, and to have a summer palace, and a winter palace, and anything else he wants! Of course!

But why this? Why *this* of all things!

No newspapers! Just like that! He waves an edict, and just like that, no newspapers! The *Beacon-*

*Sentinel* has been a great paper for the last twenty-five years! It was nothing, and I was nothing, and together we became a Voice! And now again, we are nothing!

Oh, I see what's behind it! It's revenge, that's what it is! Because he once couldn't become a "noospaper" man, he's taking his vengeance this way.

A man as petty as that shall be overthrown! Mark my words! And the clumsiness of it!

I see what he is! I know him! He's still that pup of seventeen, playing king with the world, twisting his hands in glee over his childish triumph.

No subtlety! Just a direct pushing over an applecart he couldn't steer! Doesn't matter whose apples you destroy, does it, Jonesy? Just push it over—push it over!

January 16, 1

New San Francisco

Closed the *Beacon-Sentinel* yesterday. My savings are enough to take care of me for a few years. After that—ah, well, I am no longer a young man. I am glad that Elsa is not here to see this.

February 12, 1

New San Francisco

**R**ECEIVED a letter this morning, requesting me to appear at the chambers of His Most

Imperial Majesty, Kyle the First, on Tuesday of next week. His Most Imperial Majesty can see me between 10:15 and 10:25 on that morning.

Ten minutes—rather a brief spell in which to roll another head.

I find myself amazed, though. Is this man so truly powerful that he needs no police to make his arrests for him? Can he really send messages via jetmail and be certain his enemies will not try to escape?

I don't want to attempt flight. Life without my work is no longer life.

February 17, 1

Kyleton Palace, North America

I DON'T understand. I've gone over it twice, and I don't understand. If only Elsa were still with me! I could talk to her. She would help me decipher what it's all about.

This morning, at 10:15 sharp, I was taken to the public audience chamber in the palace.

His Majesty was seated behind a desk facing the doors. Behind him, on the wall, was His Coat of Arms.

He stood up and walked toward me, waving away the guards. "How are you, Mr. Booth?" he said. And offered me His Hand!

I recovered my presence of

mind, of course, and replied as was fitting.

And then He said it! "I shall be at liberty later this week to discuss more fully the details of these past years." (Shades of "ain't got no!") "Meanwhile, my secretary will give you a complete dossier on my planned Official Bulletin." He lighted a cigarette after offering me one. "I should deem it an honor," he continued, "to have a man of your literary versatility and—I must add—your vast practical experience become Chief Editor of that Bulletin. The publication, which I should enjoy christening *The Terran Beacon-Sentinel*—with your permission, sir—shall be more than my official organ. It shall set the standards for the coming newspaper world."

He cocked an eyebrow at me and smiled. "I believe we are in perfect accord about certain standards, are we not, Mr. Booth? The deplorable grammatical practices of some newspapers! Well, really, Mr. Booth! I feel assured of your agreement!"

He led me around the desk and pointed to the Coat of Arms. As He stood silent, I felt obliged to look more closely. I had seen it before, of course, but seeing it now, greatly enlarged, I was able to make out its detail.

What I had thought was a mere decorative border, I now realized

was a motif I have seen all my life! A tiny lighthouse sending forth a beam! The trademark of my paper!

As I stood there, gaping, His Majesty laughed softly and said, "That, Mr. Booth, I felt impelled to include. For, without your most fortuitous termination of my apprenticeship in your organization, I should not have risen to my present position."

**A**GAIN He took my hand and shook it, warmly. His hair is just a bit gray at the temples, and there are signs of strain on His finely featured face. Those awkward hands are now strong and purposeful.

He apologized that He must return to His duties, and went with me to the door. "My secretary will fill in further details about your new position. Newspapers shall once again be published. No—don't say a word, Mr. Booth! I know what you are thinking.

"Your salary," he continued as we stood at the open door, "shall, of course, be commensurate to your high authority in this new field. Allow me, now, to thank you most deeply and sincerely for your unwitting aid in my youth. I assure you, Mr. Booth, I have often thought of that day we talked. And I hope to repay you, in some measure, for what you did."

He said more, mostly polite phrases of good-by. And then I was outside after being handed a folder by some man.

An official jetmobile took me to my residence—which turned out to be in the East Wing. Here I am, and I don't understand. I came prepared to suffer heaven only knows what as part of Kilmer Jones's childish pattern for revenge.

Instead, here I am, head of the Official Bulletin, titular ruler and ruler-in-fact of the future journalism of the world!

There is something behind this—I keep feeling there is. But what? What? Or is he truly generous, to a degree never before known among absolute monarchs?

February 13, 1

Kyleton Palace, North America

**I** AM a suspicious and most humble old man. I see now that Kyle's generosity amazed me only because I myself would have been incapable of such an action.

Just now, I fear for His Majesty. I was right, before, when I said there was no subtlety in the man. He is too open, too fair, too forgiving. A ruler with such greatness of heart might easily allow some small insignificant person in too far, too close. I fear for him!

February 14, 1

Kylton Palace, North America

Tomorrow we begin publication! The pressroom is magnificent! I can hardly wait. It's been a long time since I've felt such exuberance.

This afternoon I am to conduct a conference of some eight hundred editors! His Majesty's secretary has sent me an outline on Journalistic Standards, which I shall study after lunch.

There was a note attached, in His Majesty's handwriting—such beautiful penmanship, too. "A mere formality," it said, "for, of course, you and I know full well what the future of journalism shall be, Mr. Booth."

Later—

How wrong can one man be in one lifetime?

I wonder now *why* he changed the calendar. I wonder now what poor devil he destroyed then. But *I'll* cheat him!

I'll cheat him yet!

Obituary, *Trran Bacon-Sntinl*,

Fbruary 16, 1

**T**H unfortunate and untimely demise of Gorg W. Booth is hereby noted with sorrow by those who knew and loved him.

Mr. Booth, former editor and publisher of the *Bacon-Sntinl* of New San Francisco, Director of

North America, had apparently been in poor health for some time. It is blivd that worry over the success of his new policy-setting *Trran Bacon-Sntinl* was a contributing factor in his suicidal act in the afternoon of February 14.

His Most Imperial Majesty Kyl the First has ordered a fitting monument to his late lamented friend. A simple shaft of granite shall be retd in the garden facing the East Wing of Kylton Palace, where Mr. Booth made his residence. On the shaft shall be inscribed the legend:

"How outrageous mankind is! Oh  
brave new world,  
That has much people in't!"

The quotation is from *The Tempst.* Mr. Booth was a great admirer of Shakespar.

An even more fitting and long-lived memorial is expressed in the dictation through the office of His Majesty on the very day of Mr. Booth's death. It reads in part:

"The new linguistic policy on  
Trra, as demonstrated in the  
*Trran Bacon-Sntinl*, shall hence-  
forth be known as Boothtalk."

Mr. Booth befriended Our Imperial Ruler in His younger days, and, as we all know, His Majesty never forgets a friend.

—J. B. WOODLEY

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## **GALAXY'S 5 Star Shelf**

*YEAR'S BEST SCIENCE FICTION NOVELS, 1953, edited by Everett F. Bleiler and T. E. Dikty. Frederick Fell, Inc., New York, 1953. 315 pages, \$3.50*

**T**HIS second annual collection of science fiction novelets contains one from *Astounding*, one from *Thrilling Wonder*, and three from *GALAXY*. Naturally, we do feel good about the compliment.

*Astounding's* contribution is William Tenn's alien invasion tale called "Firewater." It's about "dots in bottles" from outer space that drive brainy men crazy and are themselves driven nuts by men.

*Thrilling Wonder* gives us Murray Leinster's cute and weird science fantasy "The Gadget Had a Ghost," about some characters in Istanbul who find an icy spot in a wall where no such spot



should be, and discover that small objects can be passed through it to the Thirteenth Century.

The three GALAXY items are: Boyd Ellanby's "Category Phoenix," about the immortality conferred by the Blue Martian Fever and what happens because of it in a dictatorially ruled America; James Blah's "Surface Tension," describing the adventures of microscopic men on a far planet where they had been deposited by full-sized humans; and Walter Miller's "Conditionally Human," on the heartbreaking difficulties of a poundkeeper for mutated chimps that are used as substitute children in a genetically controlled world of tomorrow.

Bleiler and Dikty are to be complimented on their second annual novelet collection; it is an excellent job.

*ORIGIN OF LIFE* by A. I. Oparin. Translated by Sergius Morgulis. Dover Publications, New York, 1953. 270 pages, \$1.70, paper

ON May 17, 1953, *The New York Times* published a long editorial on an experiment by Stanley L. Miller, a student of Professor Harold Urey at the University of Chicago. In this experiment, Miller is said to have

created some of the amino acids that are the building blocks of life, and to have done so in an "atmosphere" similar to that existing on Earth a billion and a half years ago.

In achieving this, Miller at least partially has proved, by laboratory experiment, the world-shaking geobiological theories put forward in Oparin's book here under review. Both Miller and *The Times* credit Oparin with the speculations on which the experiment was based.

On any count, then, Oparin's book—which was first published in this country in 1938 by the Macmillan Company—is of great public interest in view of new developments. But more than that, it is inherently valuable because of the lucid approach Oparin has taken to his subject, an approach brilliantly reflected by Dr. Morgulis' smooth and easy-flowing translation.

First, Oparin disposes of all previous theories of the origin of life, from spontaneous generation to the theory of the interstellar travel of life spores made popular by Arrhenius. He then goes on to show how organic matter must have come into existence *before* life itself, not after, and proves in passing that much of our store of petroleum hydrocarbons was probably created in the very beginnings of our planet.

and is not the result of the decay of plant life, as we have all been taught. He also describes some fascinating new theories on the formation of the complex protein molecules from which living things that resulted in Man were developed.

The book is moderately easy to grasp, even to people with only a high-school knowledge of chemistry. And it is epoch-making, no question of it. Make it one of your more serious "musts."

*ICEWORLD* by Hal Clement.  
Gnome Press, New York, 1953.  
216 pages, \$2.50

FOR my money, Hal Clement has the ability to make the utterly alien seem utterly real better than any other science-fiction writer now in operating condition. It is this magnificent ability to visualize that raises this tale above the average in science fiction.

The story (serialized in *As-tounding*) tells of a small group of people, from a very hot world with a sulphur atmosphere, who are aboard an interstellar trading vessel. One of the crew is a detective trying to track down the source of a hideous habit-forming drug that has been making inroads on his people.

The ship lands on Mercury (a "cold" planet to them) and trad-

ing contact is made with Ice-world, or Earth. Eventually the drug is found to be a common Earthian herb, theretofore innocently supplied by an Earthian named Wing, who received in return for small quantities of it many pounds of rare and precious metals.

Clement is a master of "imaginative realism." He refuses to mystify, or overawe, or hypnotize his readers with super-science, fantastic impossibilities and garish language. He makes his altogether unhistoric events seem real by talking about them in a completely matter-of-fact "tone of pen." Unfortunately, his aliens are more human than his human characters, which makes me wish he would deal with aliens only. Nevertheless, this is believable, exciting, and satisfying fiction.

*RING AROUND THE SUN* by Clifford D. Simak. Simon & Schuster, Inc., New York, 1953.  
242 pages, \$2.75

HERE, on the other hand, is a straight science fantasy—and a genuinely lovely book, too. It is one of those bitter-sweet, tough-gentle, purely magic fairy tales of supernormal powers, parallel worlds, enormously advanced civilizations—and children's playthings—that take you com-

pletely out of yourself.

People who read it first in *GALAXY* as a serial won't need to be told about its plot. Others will have to be tantalized with the following clues: It deals with the daydream of a Better World Next Door; the powers of paranormal magics like the mesmerizing spin of a child's top; a superscience that can produce indestructible modern conveniences practically free of charge; and the inspiring struggle between the humdrum dirtiness of Earthly industrialism and the enchantment of far-advanced science in the "better" parallel world.

It, too, in a different way, is believable, exciting and satisfying, with some of the most ingenious plot twists in recent science fiction.

*EX-PRODIGY* by Norbert Wiener. Simon & Schuster, Inc., New York, 1953. 310 pages, \$3.95

**I**T is not my intention to review this fascinating book by the man best known for his work on Cybernetics—the very name of which he invented—with anything like the completeness it calls for.

I only want to call your attention to the fact that the book is, in a sense, the autobiography of a homo superior, a man with definitely supernormal mental

powers. This alone should make it exciting for most adult science fiction readers. But furthermore it is an enthralling human document as well, a picture of "growing up" that can compete with most of the famous narratives of childhood I am familiar with.

My only disappointment in the book is that it does not discuss any of the genetic aspects of the supernormal. All Dr. Wiener does is to make it clear that he disagrees with his father's theory that a prodigy is entirely the result of special educational practices; he omits entirely any discussion of what circumstances cause or create prodigies.

It seems to me that so intelligent and introspective a man might have found it worth his while to make a few observations along these lines . . . and who would be better suited to?

But the objection is a minor one. The book is both revealing and warmly human; it deserves every reader it gets.

*ONCE UPON A STAR* by Kendall Foster Crossen. Henry Holt & Co., Inc., New York, 1953. 237 pages, \$2.95

**T**HIS is subtitled "A Novel of the Future," but actually consists of four novelets about the same characters: an insurance investigator named Manning

Draco, his caricature of a Big Business Boss called J. Barnaby Cruikshank, two practical-joking insurance-salesmen-villains named Sam Warren and Dzanku Dzanku, the latter being a native of Rigel IV, and assorted Milky Way females.

The adventures take place on various planets and involve genuine and counterfeit insurance claims arising from interstellar trade and travel.

*THE UNDYING FIRE* by Fletcher Pratt. Ballantine Books, Inc., New York, 1953. Cloth \$1.50, paper 35c

I AM sorry to have to report that this third item in the Ballantine Books' science fiction list falls far behind the quality of the first two, *Star Science Fiction* and *Space Merchants*, and also that it is far below the best that Fletcher Pratt can do. Tenuous is the word for it.

It deals with a spaceship going on a complicated trip to the light-years-distant planet of Densan to steal a neptunium motor. The astropolitics encountered are involved and the various love motifs energetic, but neither do much to rescue the book from its basic weakness—lack of inventiveness.

Here's hoping that both Bal-

lantine's and Pratt's next will be more nourishing than this one.

*THE TRANSCENDENT MAN* by Jerry Sohl. Rinehart & Co., New York, 1953. 244 pages, \$2.50

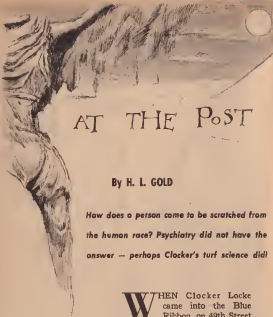
WITH books like this, the era of rental library science fiction can be said to have dawned. Facile, mechanically adequate, uninspired, often reminiscent of other peoples' ideas (the present book would not be what it was, I think, were it not for Eric Frank Russell's immeasurably superior *Sinister Barrier*), and curiously empty and wooden, like a story written with the aid of a Plotto and an IBC computer, it holds the attention, but rewards it with nothing of interest.

Briefly, the book tells how aliens from Capella, breeding on the "thought force" released by humans killed in wars, plagues and other Earthly catastrophes, control our society.

Magazine writer Martin Enders finds out all about this while trying to interview a scientist in charge of a top-secret military project. He escapes with his life, the girl, and the job of playing God to mankind, given him by the departing Capellans.

Unconvincing, but it moves fast.

—GROFF CONKLIN



# AT THE POST

By H. L. GOLD

*How does a person come to be scratched from the human race? Psychiatry did not have the answer — perhaps Clocker's turf science did!*

**W**HEN Clocker Locke came into the Blue Ribbon, on 49th Street west of Broadway, he saw that nobody had told Doc Hawkins about his misfortune. Doc, a pub-crawling, non-practicing general practitioner who wrote a daily medical column for a local tabloid, was celebrating his release from the alcoholic ward, but his

Illustrated by VIEWER



guests at the rear table of the restaurant weren't in any mood for celebration.

"What's the matter with you—have you suddenly become immune to liquor?" Clöcker heard Doc ask irritably, while Clöcker was passing the gem merchants, who, because they needed natural daylight to do business, were traditionally accorded the tables nearest the windows. "I said the drinks were on me, didn't I?" Doc insisted. "Now let us have some bright laughter and sparkling wit, or must we wait until Clöcker shows up before there is levity in the house?"

Seeing the others glance toward the door, Doc turned and looked at Clöcker. His mouth fell open silently, for the first time in Clöcker's memory.

"Good Lord!" he said after a moment. "Clöcker's become a character!"

Clöcker felt embarrassed. He still wasn't used to wearing a business suit of subdued gray, and black oxfords, instead of his usual brilliant sports jacket, slacks and two-tone suede shoes; a tie with timid little figures, whereas he had formerly been an authority on band-painted cravats; and a plain wristwatch in place of his spectacular chronograph.

By all Broadway standards, he knew, Doc was correct—he'd

become strange and eccentric, a character.

"I was Zelda's idea," Clöcker explained somberly, sitting down and shaking his head at the waiter who ambled over. "She wanted to make a gentleman out of me."

"Wanted to?" Doc repeated, bewildered. "You two kids got married just before they took my snakes away. Don't tell me you phhtt already!"

Clöcker looked appealingly at the others. They became busy with drinks and paper napkins.

Naturally, Doc Hawkins knew the background: That Clöcker was a race handicapper—publisher, if you could call it that, of a tiny tip sheet—for Doc, in need of drinking money, had often consulted him professionally. Also that Clöcker had married Zelda, the noted 52nd Street striptease, who had social aspirations. What remained to be told had occurred during Doc's inevitably temporary cure.

"Isn't anybody going to tell me?" Doc demanded.

"It was right after you tried to take the warts off a fire hydrant and they came and got you," said Clöcker, "that Zelda started hearing voices. It got real bad."

"How bad?"

"She's at Glendale Center in

an upholstered room. I just came back from visiting her."

Doc gulped his entire drink, a positive sign that he was upset, or happy, or not feeling anything in particular. Now, however, he was noticeably upset.

"Did the psychiatrists give you a diagnosis?" he asked.

"I got it memorized. Catatonia. Dementia praecox, what they used to call, one of the brain vets told me, and he said it's hopeless."

"Rough," said Doc. "Very rough. The outlook is never good in such cases."

"Maybe they can't help her," Clocker said harshly, "but I will."

"People are not horses," Doc reminded him.

"I've noticed that," said Handy Sam, the armless wonder at the flea circus, drinking beer because he had an ingrown toenail and couldn't hold a shot glass. Now that Clocker had told the grim story, he felt free to talk, which he did enthusiastically. "Clocker's got a giant brain, Doc. Who was it said Warlock'd turn into a dog in his third year? Clocker, the only dopest in the racket. And that's just one—"

"Zelda was my best flesh act," interrupted Arnold Wilson Wyle, a ten-percenter whom video had saved from alimony jail. "A solid boffola in the bop basements.

Nobody regrets her sad condition more than me, Clocker, but it's a sure flop, what you got in mind. Think of your public. For instance, what's good at Hialeah? My bar bill is about to be foreclosed and I can use a long shot."

Clocker bounced his fist on the moist table. "Those couch artists don't know what's wrong with Zelda. I do."

"You do?" Doc asked, startled.

"Well, almost. I'm so close, I can hear the finish-line camera clicking."

Buttonhole grasped Doc's lapel and hung on with characteristic avidity; he was perhaps Clocker's most pious subscriber. "Doping races is a science. Clocker maybe never doped the human race, but I got nine to five he can do it. Go on, tell him, Clocker."

DOC Hawkins ran together the rings he had been making with the wet bottom of his tumbler. "I shall be most interested," he said with tabloid irony, clearly feeling that immediate disillusionment was the most humane thing for Clocker. "Perhaps we can collaborate on an article for the psychiatric journals."

"All right, look." Clocker pulled out charts resembling those he worked with when making turf selections. "Zelda's got catatonia, which is the last heat in the



schizophrenia parlay. She used to be a hooper before she started undressing for dough, and now she does time-steps all day."

Doc nodded into a fresh glass that the waiter had put before him. "Stereotyped movements are typical of catatonia. They derive from thwarted or repressed instinctual drive; in most instances, the residue of childhood frustrations."

"She dance all day, huh, Clocker?" asked Oil Pocket, the Oklahoma Cherokee who, with the income of several wells, was famed for angeling bareback shows. He had a glass of tequila in one hand, the salted half of a lemon in the other. "She dance good?"

"That's just it," Clocker said. "She does these time-steps, the first thing you learn in hoofing, over and over, ten-fifteen hours a day. And she keeps talking like she's giving lessons to some jerk kid who can't get it straight. And she was the kid with the hot routines, remember."

"The hottest," agreed Arnold Wilson Wyle. "Zelda doing time-steps is like Heifetz fiddling at weddings."

"I still like to put her in show," Oil Pocket grunted. "She stacked like brick tepee. Don't have to dance good."

"You'll have a long wait," observed Doc sympathetically, "in

spite of what our young friend here says. Continue, young friend."

Clocker spread his charts. He needed the whole table. The others removed their drinks, Handy Sam putting his on the floor so he could reach it more easily.

"This is what I got out of checking all the screwball factories I could reach personal and by mail," Clocker said. "I went around and talked to the doctors and watched the patients in the places near here, and wrote to the places I couldn't get to. Then I broke everything down like it was a stud and track record."

Buttonhole tugged Doc's lapel. "That ain't scientific, I suppose," he challenged.

"Duplication of effort," Doc replied, patiently allowing Buttonhole to retain his grip. "It was all done in an organized fashion over a period of more than half a century. But let us hear the rest."

"FIRST," said Clocker, "there are more male bats than fillies."

"Females are inherently more stable, perhaps because they have a more balanced chromosome arrangement."

"There are more nuts in the brain rackets than labor chumps."

"Intellectual activity increases the area of conflict"

"There are less in the sticks than in the cities, and practically none among the savages. I mean real savages," Clocker told Handy Sam, "not marks for con merchants."

"I was wondering," Handy Sam admitted.

"Complex civilization creates psychic insecurity," said Doc.

"When these catatonics pull out, they don't remember much or maybe nothing," Clocker went on, referring to his charts.

Doc nodded his shaggy white head. "Protective amnesia."

"I seen hundreds of these mental gimps. They work harder and longer at what they're doing, even just laying down and doing nothing, than they ever did when they were regular citizens."

"Concentration of psychic energy, of course."

"And they don't get a damn cent for it."

DOC hesitated, put down his half-filled tumbler. "I beg your pardon?"

"I say they're getting stiffed," Clocker stated. "Anybody who works that hard ought to get paid. I don't mean it's got to be money, although that's the only kind of pay Zelda'd work for. Right, Arnold?"

"Well, sure," said Arnold Wilson Wyle wonderingly. "I never thought of it like that. Zelda do-

ing time-steps for nothing ten-fifteen hours a day—that ain't Zelda."

"If you ask me, she *likes* her job," Clocker said. "Same with the other catatonics I seen. But for no pay?"

Doc surprisingly pushed his drink away, something that only a serious medical puzzle could ever accomplish. "I don't understand what you're getting at."

"I don't know these other catatonics, but I do know Zelda," said Arnold Wilson Wyle. "She's got to get something out of all that work. Clocker says it's the same with the others and I take his word. What are they knocking theirself out for if it's for free?"

"They gain some obscure form of emotional release or repetitive gratification," Doc explained.

"Zelda?" exploded Clocker. "You offer her a deal like that for a club date and she'd get ruptured laughing."

"I tell her top billing," Oil Pocket agreed, "plenty ads, plenty publicity, whole show built around her. Wampum, she says; save money on ads and publicity, give it to her. Zelda don't count coups."

Doc Hawkins called over the waiter, ordered five fingers instead of his customary three. "Let us not bicker," he told Clocker. "Continue."

CLOCKER looked at his charts again. "There ain't a line that ain't represented, even the heavy rackets and short grifts. It's a regular human steeplechase. And these sour apples do mostly whatever they did for a living—draw pictures, sell shoes, do lab experiments, sew clothes, Zelda with her time-steps. By the hour! In the air!"

"In the air?" Handy Sam repeated. "Flying?"

"Imaginary functioning," Doc elaborated for him. "They have nothing in their hands. Pure hallucination. Systematic delusion."

"Sign language?" Oil Pocket suggested.

"That," said Clocker, before Doc Hawkins could reject the notion, "is on the schnoz, Injun. Buttonhole says I'm like doping races. He's right. I'm working out what some numbers-runner tells me is probabilities. I got it all here," he rapped the charts, "and it's the same thing all these flop-ears got in common. Not their age, not their jobs, not their—you should pardon the expression—sex. They're *teaching*."

Buttonhole looked baffled. He almost let go of Doc's lapel.

Handy Sam scratched the back of his neck thoughtfully with a big toe. "Teaching, Clocker? Who? You said they're kept in solitary."

"They are. I don't know who.

I'm working on that now."

Doc shoved the charts aside belligerently to make room for his beefy elbows. He leaned forward and glowered at Clocker. "Your theory belongs in the Sunday supplement of the alleged newspaper I write for. Not all catatonics work, as you call it. What about those who stand rigid and those who lie in bed all the time?"

"I guess you think that's easy," Clocker retorted. "You try it sometime. I did. It's work, I tell you." He folded his charts and put them back into the inside pocket of his conservative jacket. He looked sick with longing and loneliness. "Damn, I miss that mouse. I got to save her, Doc! Don't you get that?"

Doc Hawkins put a chunky hand gently on Clocker's arm. "Of course, boy. But how can you succeed when trained men can't?"

"Well, take Zelda. She did time-steps when she was maybe five and going to dancing school—"

"Time-steps have some symbolic significance to her," Doc said with more than his usual tact. "My theory is that she was compelled to go against her will, and this is a form of unconscious rebellion."

"They don't have no significance to her," Clocker argued

doggedly. "She can do time-steps blindfolded and on her knees with both ankles tied behind her back." He pried Buttonhole's hand off Doc's lapel, and took hold of both of them himself. "I tell you she's teaching, explaining, breaking in some dummy who can't get the hang of it!"

"But who?" Doc objected. "Psychiatrists? Nurses? You? Admit it, Clocker—she goes on doing time-steps whether she's alone or not. In fact, she never knows if anybody is with her. Isn't that so?"

"Yeah," Clocker said grudgingly. "That's what has me boxed."

**O**IL Pocket granted tentatively, "White men not believe in spirits. Injuns, do. Maybe Zelda talk to spirits."

"I been thinking of that," confessed Clocker, looking at the red angel unhappily. "Spirits is all I can figure. Ghosts. Spooks. But if Zelda and these other catatonics are teaching ghosts, these ghosts are the dumbest jerks anywhere. They make her and the rest go through time-steps or sewing or selling shoes again and again. If they had half a brain, they'd get it in no time."

"Maybe spirits not hear good," Oil Pocket offered, encouraged by Clocker's willingness to con-

sider the hypothesis.

"Could be," Clocker said with partial conviction. "If we can't see them, it may be just as hard for them to see or hear us."

Oil Pocket anxiously hitched his chair closer. "Old squaw name Dry Ground Never Rainy Season—what you call old maid—hear spirits all the time. She keep telling us what they say. Nobody listen."

"How come?" asked Clocker interestedly.

"She deaf, blind. Not hear thunder. Walk into cactus, yell like hell. She hardly see us, not hear us at all, how come she see and hear spirits? Just talk, talk, talk all the time."

Clocker frowned, thinking. "These catatonics don't see or hear us, but they sure as Citation hear and see something."

Doc Hawkins stood up with dignity, hardly weaving, and handed a bill to the waiter. "I was hoping to get a private racing tip from you, Clocker. Freshly sprung from the alcoholic ward, I can use some money. But I see that your objectivity is impaired by emotional considerations. I wouldn't risk a dime on your advice even after a race is run."

"I didn't expect you to believe me," said Clocker despairingly. "None of you pill-pushers ever do."

"I can't say about your psycho-doping," declared Arnold Wilson Wyle, also rising. "But I got faith in your handicapping. I'd still like a long shot at His-leah if you happen to have one."

"I been too busy trying to help Zelda," Clocker said in apology.

They left, Doc Hawkins pausing at the bar to pick up a credit bottle to see him through his overdue medical column.

Handy Sam slipped on his shoes to go. "Stick with it, Clocker. I said you was a scientist—"

"I said it," contradicted Buttonhole, lifting himself out of the chair on Handy Sam's lapels. "If anybody can lick this caper, Clocker can."

Oil Pocket glumly watched them leave. "Doctors not think spirits real," he said. "I get sick, go to Reservation doctor. He give me medicine. I get sicker. Medicine man see evil spirits make me sick. Shakes rattle. Dances. Evil spirits go. I get better."

"I don't know what in hell to think," confided Clocker, miserable and confused. "If it would help Zelda, I'd cut my throat from head to foot so I could become a spirit and get the others to lay off her."

"Then you spirit, she alive. Making love not very practical."

"Then what do I do—hire a medium?"

"Get medicine man from Reservation. He drive out evil spirits."

Clocker pushed away from the table. "So help me, I'll do it if I can't come up with something cheaper than paying freight from Oklahoma."

"Get Zelda out, I pay and put her in show."

"Then if I haul the guy here and it don't work, I'm in hock to you. Thanks, Oil Pocket, but I'll try my way first."

**B**ACK in his hotel room, waiting for the next day so he could visit Zelda, Clocker was like an addict at the track with every cent on a hunch. After weeks of neglecting his tip sheet to study catatonia, he felt close to the payoff.

He spent most of the night smoking and walking around the room, trying not to look at the jars and hairbrushes on the bureau. He missed the bobbypins on the floor, the nylons drying across the shower rack, the toothpaste tubes squeezed from the top. He'd put her perfumes in a drawer, but the smell was so pervasively haunting that it was like having her stand invisibly behind him.

As soon as the sun came up, he hurried out and took a cab. He'd have to wait until visiting hours, but he couldn't stand the



slowness of the train. Just being in the same building with her would—almost—be enough.

When he finally was allowed into Zelda's room, he spent all his time watching her silently, taking in every intently mumbled word and movement. Her movements, in spite of their gratingly basic monotony, were particularly something to watch, for Zelda had blue-black hair down to her shapely shoulders, wide-apart blue eyes, sulky mouth, and an astonishing body. She used all her physical equipment with unconscious provocativeness, except her eyes, which were blankly distant.

Clocker stood it as long as he could and then burst out, "Damn it, Zelda, how long can they take to learn a time-step?"

She didn't answer. She didn't see him, hear him, or feel him. Even when he kissed her on the back of the neck, her special place, she did not twist her shoulder up with the sudden thrill.

He took out the portable phonograph he'd had permission to bring in, and hopefully played three of her old numbers—a ballet tap, a soft shoe, and, most potent of all, her favorite slinky strip tune. Ordinarily, the beat would have thrown her off, but not any more.

"Dead to this world," muttered Clocker dejectedly.

He shook Zelda. Even when she was off-balance, her feet tapped out the elementary routine.

"Look, kid," he said, his voice tense and angry. "I don't know who these squares are that you're working for, but tell them if they got you, they got to take me, too."

Whatever he expected—ghostly figures to materialize or a chill wind—from nowhere—nothing happened. She went on tapping.

He sat down on her bed. They picked people the way he picked horses, except he picked to win and they picked to show. To show? Of course. Zelda was showing them how to dance and also, probably, teaching them about the entertainment business. The others had obviously been selected for what they knew, which they went about doing as single-mindedly as she did.

HE had a scheme that he hadn't told Doc because he knew it was crazy. At any rate, he hoped it was. The weeks without her had been a hell of loneliness—for him, not for her; she wasn't even aware of the awful loss. He'd settle for that, but even better would be freeing her somehow. The only way he could do it would be to find out who controlled her and what they were after. Even with that information, he couldn't be sure of succeed-

ing, and there was a good chance that he might also be caught, but that didn't matter.

The idea was to interest them in what he knew so they would want to have him explain all he knew about racing. After that—well, he'd make his plans when he knew the setup.

Clocker came close to the automatic time-step machine that had been his wife. He began talking to her, very loudly, about the detailed knowledge needed to select winners, based on stud records, past performances of mounts and jockeys, condition of track and the influence of the weather—always, however, leaving out the data that would make sense of the whole complicated industry. It was like roping a patsy and holding back the buzzer until the dough was down. He knew he risked being cold-decked, but it was worth the gamble. His only worry was that hoarseness would stop him before he hooked their interest.

An orderly, passing in the corridor, heard his voice, opened the door and asked with ponderous humor, "What you doing, Clocker—trying to take out a membership card in this country club?"

Clocker leaped slightly. "Uh, working on a private theory," he said, collected his things with a little more haste than he would

have liked to show, kissed Zelda without getting any response whatever, and left for the day.

But he kept coming back every morning. He was about to give up when the first feelings of unreality dazed and dazzled him. He carefully suppressed his excitement and talked more loudly about racing. The world seemed to be slipping away from him. He could have hung onto it if he had wanted. He didn't. He let the voices come, vague and far away, distorted, not quite meaningless, but not adding up to much, either.

And then, one day, he didn't notice the orderly come in to tell him that visiting hours were over. Clocker was explaining the fundamentals of horse racing . . . meticulously, with immense patience, over and over and over . . . and didn't hear him.

IT had been so easy that Clocker was disappointed. The first voices had argued gently and reasonably over him, each claiming priority for one reason or another, until one either was assigned or pulled rank. That was the voice that Clocker eventually kept hearing—a quiet, calm voice that constantly faded and grew stronger, as if it came from a great distance and had trouble with static. Clocker remembered the crystal set his fath-



er had bought when radio was still a toy. It was like that.

Then the unreality vanished and was replaced by a dramatic new reality. He was somewhere far away. He knew it wasn't on Earth, for this was like nothing except, perhaps, a World's Fair. The buildings were low and attractively designed, impressive in spite of their softly blended spectrum of pastel colors. He was in a huge square that was grass-covered and tree-shaded and decorated with classical sculpture. Hundreds of people stood with him, and they all looked shaken and scared. Clocker felt nothing but elation; he'd arrived. It made no difference that he didn't know where he was or anything about the setup. He was where Zelda was.

"How did I get here?" asked a little man with bifocals and a vest that had pins and threaded needles stuck in it. "I can't take time for pleasure trips. Mrs. Jacobs is coming in for her fitting tomorrow and she'll positively murder me if her dress ain't ready."

"She can't," Clocker said. "Not any more."

"You mean we're dead?" someone else asked, awed. It was a softly pudgy woman with excessively blonde hair, a greasily red-lipped smile and a flowered housecoat. She looked around

with great approval. "Hey, this ain't bad! Like I always said, either I'm no worse than anybody else or they're no better'n me. How about that, dearie?"

"Don't ask me," Clocker evaded. "I think somebody's going to get an earful, but you ain't dead. That much I can tell you."

The woman looked disappointed.

Some people in the crowd were complaining that they had families to take care of while others were worried about leaving their businesses. They all grew silent, however, when a man climbed up on a sort of marble rostrum in front of them. He was very tall and dignified and wore formal clothes and had a white beard parted in the center.

"Please feel at ease," he said in a big, deep, soothing voice, like a radio announcer for a symphony broadcast. "You are not in any danger. No harm will come to you."

"You *sure* we ain't dead, sweetie?" the woman in the flowered housecoat asked Clocker. "Isn't that—"

"No," said Clocker. "He'd have a halo, wouldn't he?"

"Yeah, I guess so," she agreed doubtfully.

The white-bearded man went on, "If you will listen carefully to this orientation lecture, you will know where you are and

why. May I introduce Gerald W. Harding? Dr. Harding is in charge of this reception center. Ladies and gentlemen, Dr. Harding."

A NUMBER of people applauded out of habit . . . probably lecture fans or semi-pro TV studio audiences. The rest, including Clocker, waited as an aging man in a white lab smock, heavy-rimmed eyeglasses and smooth pink cheeks, looking like a benevolent doctor in a mouthwash ad, stood up and faced the crowd. He put his hands behind his back, rocked on his toes a few times, and smiled benevolently.

"Thank you, Mr. Calhoun," he said to the bearded man who was seating himself on a marble bench. "Friends—and I trust you will soon regard us as your friends—I know you are puzzled at all this." He waved a white hand at the buildings around them. "Let me explain. You have been chosen—yes, carefully screened and selected—to help us in undoubtedly the greatest cause of all history. I can see that you are asking yourselves *why* you were selected and what this cause is. I shall describe it briefly. You'll learn more about it as we work together in this vast and noble experiment."

The woman in the flowered

housecoat looked enormously flattered. The little tailor was nodding to show he understood the points covered thus far. Glancing at the rest of the crowd, Crocker realized that he was the only one who had this speech pegged. It was a pitch. These men were out for something.

He wished Doc Hawkins and Oil Pocket were there. Doc doubtless would have searched his unconscious for symbols of childhood traumas to explain the whole thing; he would never have accepted it as some kind of reality. Oil Pocket, on the other hand, would somehow have tried to equate the substantial Mr. Calhoun and Dr. Harding with tribal spirits. Of the two, Clocker felt that Oil Pocket would have been closer.

Or maybe he was in his own corner of psychosis, while Oil Pocket would have been in another, more suited to Indians. Spirits or figments? Whatever they were, they looked as real as anybody he'd ever known, but perhaps that was the naturalness of the supernatural or the logic of insanity.

Clocker shivered, aware that he had to wait for the answer. The one thing he did know, as an authority on cons, was that this had the smell of one, supernatural or otherwise. He watched and listened like a detective shad-

owing an escape artist.

"This may be something of a shock," Dr. Harding continued with a humorous, sympathetic smile. "I hope it will not be for long. Let me state it in its simplest terms. You know that there are billions of stars in the Universe, and that stars have planets as naturally as cats have kittens. A good many of these planets are inhabited. Some life-forms are intelligent, very much so, while others are not. In almost all instances, the dominant form of life is quite different from—yours."

Unable to see the direction of the con, Clocker felt irritated.

"Why do I say yours, not ours?" asked Dr. Harding. "Because, dear friends, Mr. Calhoun and I are not of your planet or solar system. No commotion, please!" he urged, raising his hands as the crowd stirred bewilderedly. "Our names are not Calhoun and Harding; we adopted those because our own are so alien that you would be unable to pronounce them. We are not formed as you see us, but this is how we *might* look if we were human beings, which, of course, we are not. Our true appearance seems to be—ah—rather confusing to human eyes."

**N**UTS, Clocker thought irreverently. Get to the point.

"I don't think this is the time

for detailed explanations," Dr. Harding hurried on before there were any questions. "We are friendly, even altruistic inhabitants of a planet 10,000 light-years from Earth. Quite a distance, you are thinking; how did we get here? The truth is that we are not 'here' and neither are you. 'Here' is a projection of thought, a hypothetical point in space, a place that exists only by mental force. Our physical appearances and yours are telepathic representations. Actually, our bodies are on our own respective planets."

"Very confusing," complained a man who looked like a banker. "Do you have any idea of what he's trying to tell us?"

"Not yet," Clocker replied with patient cynicism. "He'll give us the convincer after the buildup."

The man who looked like a banker stared sharply at Clocker and moved away. Clocker shrugged. He was more concerned with why he didn't feel tired or bored just standing there and listening. There was not even an overpowering sense of urgency and annoyance, although he wanted to find Zelda and this lecture was keeping him from looking for her. It was as if his emotions were somehow being reduced in intensity. They existed, but lacked the strength they should have had.

So he stood almost patiently and listened to Dr. Harding say, "Our civilization is considerably older than yours. For many of your centuries, we have explored the Universe, both physically and telepathically. During this exploration, we discovered your planet. We tried to establish communication, but there were grave difficulties. It was the time of your Dark Ages, and I'm sorry to report that those people we made contact with were generally burned at the stake." He shook his head regretfully. "Although your civilization has made many advances in some ways, communication is still hampered—as much by false knowledge as by real ignorance. You'll see in a moment why it is very unfortunate."

"Here it comes," Clocker said to those around him. "He's getting ready finally to slip us the sting."

The woman in the housecoat looked indignant. "The nerve of a crumb like you making a crack about such a fine, decent gentleman!"

"A blind man could see he's sincere," argued the tailor. "Just think of it—me, in a big experiment! Will Molly be surprised when she finds out!"

"She won't find out and I'll bet she's surprised right now," Clocker assured him.

"The human body is an unbelievably complicated organism," Dr. Harding was saying. The statement halted the private discussion and seemed to please his listeners for some reason. "We learned that when we tried to assume control of individuals for the purpose of communication. Billions of neural relays, thousands of unvolitional functions—it is no exaggeration to compare our efforts with those of a monkey in a power plant. At our direction, for example, several writers produced books that were fearfully garbled. Our attempts with artists were no more successful. The static of interstellar space was partly responsible, but mostly it was the fact that we simply couldn't work our way through the maze that is the human mind and body."

THE crowd was sympathetic. Clocker was neither weary nor bored, merely longing for Zelda and, as a student of grifts, dimly irritated. Why hold back when the champs were set up?

"I don't want to make a long story of our problems," smiled Dr. Harding. "If we could visit your planet in person, there would be no difficulty. But 10,000 light-years is an impossible barrier to all except thought waves, which, of course, travel at infinite speed. And this, as I said

before, is very unfortunate, because the human race is doomed."

The tailor stiffened. "Doomed? Molly? My kids? All my customers?"

"Your customers?" yelped the woman in the housecoat. "How about mine? What's gonna happen, the world should be doomed?"

Clocker found admiration for Dr. Harding's approach. It was a line tried habitually by politicians, but they didn't have the same kind of captive audience, the control, the contrived background. A cosmic pitch like this could bring a galactic payoff, whatever it might be. But it didn't take his mind off Zelda.

"I see you are somewhat aghast," Dr. Harding observed. "But is my statement really so unexpected? You know the history of your own race—a record of incessant war, each more devastating than the last. Now, finally, Man has achieved the power of worldwide destruction. The next war, or the one after that, will unquestionably be the end not only of civilization, but of humanity—perhaps even your entire planet. Our peaceful, altruistic civilization might help avert catastrophe, but that would require our physical landing on Earth, which is not possible. Even if it were, there is not enough time. Armageddon draws near.

"Then why have we brought you here?" asked Dr. Harding. "Because Man, in spite of his suicidal blunders, is a magnificent race. He must not vanish without leaving a complete record of his achievements."

The crowd nodded soberly. Clocker wished he had a cigarette and his wife. In her right mind, Zelda was unswervingly practical and she would have had some noteworthy comments to make.

"This is the task we must work together on," said Dr. Harding forcefully. "Each of you has a skill, a talent, a special knowledge we need for the immense record we are compiling. Every area of human society must be covered. We need you—urgently! Your data will become part of an imperishable social document that shall exist untold eons after mankind has perished."

VISIBLY, the woman in the housecoat was stunned. "They want to put down what *I* can tell them?"

"And tailoring?" asked the little man with the pin-cushion vest. "How to make buttonholes and press clothes?"

The man who looked like a banker had his chin up and a pleased expression on his pudgy face.

"I always knew I'd be appreciated some day," he stated

smugly. "I can tell them things about finance that those idiots in the main office can't even guess at."

Mr. Calhoun stood up beside Dr. Harding on the rostrum. He seemed infinitely benign as he raised his hands and his deep voice.

"Friends, we need your help, your knowledge. I know you don't want the human race to vanish without a trace, as though it had never existed. I'm sure it thrills you to realize that some researcher, far in the future, will one day use the very knowledge that you gave. Think what it means to leave your personal imprint indelibly on cosmic history!" He paused and leaned forward. "Will you help us?"

The faces glowed, the hands went up, the voices cried that they would.

Dazzled by the success of the sell, Clocker watched the people happily and flatteredly follow their frock-coated guides toward the various buildings, which appeared to have been laid out according to very broad categories of human occupation.

He found himself impelled along with the chattering, excited woman in the housecoat toward a cerise structure marked **SPORTS AND RACKETS**. It seemed that she had been angry at not having been interviewed

for a recent epic survey, and this was her chance to decant the experiences of twenty years.

Clocker stopped listening to her gabble and looked for the building that Zelda would probably be in. He saw **ARTS AND ENTERTAINMENT**, but when he tried to go there, he felt some compulsion keep him heading toward his own destination.

Looking back helplessly, he went inside.

HE found that he was in a cubicle with a fatherly kind of man who had thin gray hair, kindly eyes and a firm jaw, and who introduced himself as Eric Barnes. He took Clocker's name, age, specific trade, and gave him a serial number which, he explained, would go on file at the central archives on his home planet, cross-indexed in multiple ways for instant reference.

"Now," said Barnes, "here is our problem, Mr. Lockt. We are making two kinds of perpetual records. One is written; more precisely, microscribed. The other is a wonderfully exact duplicate of your cerebral pattern—in more durable material than brain matter, of course."

"Of course," Clocker said, nodding like an obedient patsy.

"The verbal record is difficult enough, since much of the data you give us must be, by its na-

ture, foreign to us. The duplication of your cerebral pattern, however, is even more troublesome. Besides the inevitable distortion caused by a distance of 10,000 light-years and the fields of gravitation and radiation of all types intervening, the substance we use in place of brain cells absorbs memory quite slowly." Barnes smiled reassuringly. "But you'll be happy to know that the impression, once made, can never be lost or erased!"

"Delighted," Clocker said flatly. "Tickled to pieces."

"I knew you would be. Well, let us proceed. First, a basic description of horse racing."

Clocker began to give it. Barnes held him down to a single sentence—"To check reception and retention," he said.

The communication box on the desk lit up when Clocker repeated the sentence a few times, and a voice from the box said, "Increase output. Initial impression weak. Also wave distortion. Correct and continue."

Barnes carefully adjusted the dials and Clocker went on repeating the sentence, slowing down to the speed Barnes requested. He did it automatically after a while, which gave him a chance to think.

He had no plan to get Zelda out of here; he was improvising and he didn't like it. The setup

still had him puzzled. He knew he wasn't dreaming all this, for there were details his imagination could never have supplied, and the notion of spirits with scientific devices would baffle even Oil Pocket.

Everybody else appeared to accept these men as the aliens they claimed to be, but Clocker, fearing a con he couldn't understand, refused to. He had no other explanation, though, no evidence of any kind except deep suspicion of any noble-sounding enterprise. In his harsh experience, they always had a profit angle hidden somewhere.

Until he knew more, he had to go along with the routine, hoping he would eventually find a way out for Zelda and himself. While he was repeating his monotonous sentence, he wondered what his body was doing back on Earth. Lying in a bed, probably, since he wasn't being asked to perform any physical jobs like Zelda's endless time-step.

That reminded him of Doc Hawkins and the psychiatrists. There must be some here; he wished vengefully that he could meet them and see what they thought of their theories now.

THEN came the end of what was apparently the work day.

"We're making splendid progress," Barnes told him. "I know





how tiresome it is to keep saying the same thing over and over, but the distance is such a great obstacle. I think it's amazing that we can even bridge it, don't you? Just imagine—the light that's reaching Earth at this very minute left our star when mammoths were roaming your western states and mankind lived in caves! And yet, with our thought-wave boosters, we are in instantaneous communication!"

The soap, Clocker thought, to make him feel he was doing something important.

"Well, you are doing something important," Barnes said, as though Clocker had spoken.

Clocker would have turned red if he had been able to. As it was, he felt dismay and embarrassment.

"Do you realize the size and value of this project?" Barnes went on. "We have a more detailed record of human society than Man himself ever had! There will be not even the most insignificant corner of your civilization left unrecorded! Your life, my life—the life of this Zelda whom you came here to rescue—all are trivial, for we must die eventually, but the project will last eternally!"

Clocker stood up, his eyes hard and worried. "You're telling me you know what I'm here for?"

"To secure the return of your

wife. I would naturally be aware that you had submitted yourself to our control voluntarily. It was in your file, which was sent to me by Admissions."

"Then why did you let me in?"

"Because, my dear friend—"

"Leave out the 'friend' pitch. I'm here on business."

Barnes shrugged. "As you wish. We let you in, as you express it, because you have knowledge that we should include in our archives. We hoped you would recognize the merit and scope of our undertaking. Most people do, once they are told."

"Zelda, too?"

"Oh, yes," Barnes said emphatically. "I had that checked by Statistics. She is extremely cooperative, quite convinced—"

"Don't hand me that!"

**B**ARNES rose. Straightening the papers on his desk, he said, "You want to speak to her and see for yourself? Fair enough."

He led Clocker out of the building. They crossed the great square to a vast, low structure that Barnes referred to as the Education and Recreation Center.

"Unless there are special problems," Barnes said, "our human associates work twelve or fourteen of your hours, and the rest of the time is their own. Sleep

isn't necessary to the psychic projection, of course, though it is to the body on Earth. And what, Mr. Locke, would you imagine they choose as their main amusements?"

"Pinball machines?" Clocker suggested ironically. "Cr a p games?"

"Lectures," said Barnes with pride. "They are eager to learn everything possible about our project. We've actually had the director himself address them! Oh, it was inspiring, Mr. Locke—color films in three dimensions, showing the great extent of our archives, the many millions of synthetic brains, each with indestructible memories of skills and crafts and professions and experiences that soon will be no more—"

"Save it. Find Zelda for me and then blow. I want to talk to her alone."

Barnes checked with the equivalent of a box office at the Center, where, he told Clocker, members of the audience and staff were required to report before entering, in case of emergency.

"Like what?" Clocker asked.

"You have a suspicious mind," said Barnes patiently. "Faulty neuron circuit in a synthetic duplicate brain, for example. Photon storms interfering with reception. Things of that sort."

"So where's the emergency?"

"We have so little time. We ask the human associate in question to record again whatever was not received. The percentage of refusal is actually zero! Isn't that splendid?"

"Best third degree I ever heard of," Clocker admitted through clamped teeth. "The cops on Earth would sell out every guy they get graft from to buy a thing like this."

THEY found Zelda in a small lecture hall, where a matronly woman from the other planet was urging her listeners to conceal nothing, however intimate, while recording—"Because," she said, "this must be a psychological as well as a cultural and sociological history."

Seeing Zelda, Clocker rushed to her chair, hauled her upright, kissed her, squeezed her.

"Baby!" he said, more choked up than he thought his control would allow. "Let's get out of here!"

She looked at him without surprise. "Oh, hello, Clocker. Later. I want to hear the rest of this lecture."

"Ain't you glad to see me?" he asked, hurt. "I spend months and shoot every dime I got just to find you—"

"Sure I'm glad to see you, hon," she said, trying to look past

him at the speaker. "But this is so important—"

Barnes came up, bowed politely. "If you don't mind, Miss Zelda, I think you ought to talk to your husband."

"But what about the lecture?" asked Zelda anxiously.

"I can get a transcription for you to study later."

"Well, all right," she agreed reluctantly.

Barnes left them on a strangely warm stone bench in the great square, after asking them to report back to work at the usual time. Zelda, instead of looking at Clocker, watched Barnes walk away. Her eyes were bright; she almost radiated.

"Isn't he wonderful, Clocker?" she said. "Aren't they all wonderful? Regular scientists, every one of them, devoting their whole life to this terrific cause!"

"What's so wonderful about that?" he all but snarled.

She turned and gazed at him in mild astonishment. "They could let the Earth go boom. It wouldn't mean a thing to them. Everybody wiped out just like there never were any people. Not even as much record of us as the dinosaurs! Wouldn't that make you feel simply awful?"

"I wouldn't feel a thing." He took her unresponsive hand. "All I'm worried about is us, baby. Who cares about the rest of the

world doing a disappearing act?"

"I do. And so do they. They aren't selfish like some people I could mention."

"Selfish? You're damned right I am!"

HE pulled her to him, kissed her neck in her favorite place. It got a reaction—restrained annoyance.

"I'm selfish," he said, "because I got a wife I'm nuts about and I want her back. They got you wrapped, baby. Can't you see that? You belong with me in some fancy apartment, the minute I can afford it, like one I saw over on Riverside Drive—seven big rooms, three baths, one of them with a stall shower like you always wanted, the Hudson River and Jersey for our front lawn—"

"That's all in the past, hon," she said with quiet dignity. "I have to help out on this project. It's the least I can do for history."

"The hell with history! What did history ever do for us?" He put his mouth near her ear, breathing gently in the way that once used to make her squirm in his arms like a tickled doe. "Go turn in your time-card, baby. Tell them you got a date with me back on Earth."

She pulled away and jumped up. "No! This is my job as much as theirs. More, even. They don't

keep anybody here against their will. I'm staying because I want to, Clocker."

Furious, he snatched her off her feet. "I say you're coming back with me! If you don't want to, I'll drag you, see?"

"How?" she asked calmly.

He put her down again slowly, frustratedly. "Ask them to let you go, baby. Oil Pocket said he'd put you in a musical. You always did want to hit the big time—"

"Not any more." She smoothed down her dress and patted up her hair. "Well, I want to catch the rest of that lecture, hon. See you around if you decide to stay."

He sat down morosely and watched her snake-hip toward the Center, realizing that her seductive walk was no more than professional conditioning. She had grown in some mysterious way, become more serene—at peace.

He had wondered what catatonics got for their work. He knew now—the slickest job of hypnotic flattery ever invented. That was *their* pay.

But what did the pitchmen get in return?

CLOCKER put in a call for Barnes at the box office of the Center. Barnes left a lecture for researchers from his planet

and joined Clocker with no more than polite curiosity on his paternal face. Clocker told him briefly and bitterly about his talk with Zekla, and asked bluntly what was in it for the aliens.

"I think you can answer that," said Barnes. "You're a scientist of a sort. You determine the probable performance of a group of horses by their heredity, previous races and other factors. A very laborious computation, calling for considerable aptitude and skill. With that same expenditure of energy, couldn't you earn more in other fields?"

"I guess so," Clocker said. "But I like the track."

"Well, there you are. The only human form of gain we share is desire for knowledge. You devote your skill to predicting a race that is about to be run; we devote ours to recording a race that is about to destroy itself."

Clocker grabbed the alien's coat, pushed his face grimly close. "There, that's the hook! Take away the doom push and this racket folds."

Barnes looked bewildered. "I don't comprehend—"

"Listen, suppose everything's square. Let's say you guys really are leveling, these marks aren't being roped, you're knocking yourself out because your guess is that we're going to commit suicide."

"Oh," Barnes nodded somberly. "Is there any doubt of it? Do you honestly believe the holocaust can be averted?"

"I think it can be stopped, yeah. But you birds act like you don't want it to be. You're just laying back, letting us bunch up, collecting the insurance before the spill happens."

"What else can we do? We're scientists, not politicians. Besides, we've tried repeatedly to spread the warning and never once succeeded in transmitting it."

Clocker released his grip on the front of Barnes's jacket. "You take me to the president or commissioner or whoever runs this club. Maybe we can work something out."

"We have a board of directors," Barnes said doubtfully. "But I can't see—"

"Don't rupture yourself trying. Just take me there and let me do the talking."

Barnes moved his shoulders resignedly. He led Clocker to the Administration Building and inside to a large room with paneled walls, a long, solid table and heavy, carved chairs. The men who sat around the table appeared as solid and respectable as the furniture. Clocker's guess was that they had been chosen deliberately, along with the decorations, to inspire confidence in the

customer. He had been in rigged horse parlors and bond stores and he knew the approach.

MR. CALHOUN, the character with the white beard, was chairman of the board. He looked unhappily at Clocker.

"I was afraid there would be trouble," he said. "I voted against accepting you, you know. My colleagues, however, thought that you, as our first voluntary associate, might indicate new methods, but I fear my judgment has been vindicated."

"Still, if he knows how extinction can be prevented—" began Dr. Harding, the one who had given the orientation lecture.

"He knows no such thing," a man with several chins said in an emphatic basso voice. "Man is the most destructive dominant race we have ever encountered. He despoiled his own planet, exterminated lower species that were important to his own existence, oppressed, suppressed, brutalized, corrupted—it's the saddest chronicle in the Universe."

"Therefore his achievements," said Dr. Harding, "deserve all the more recognition!"

Clocker broke in: "If you'll lay off the gab, I'd like to get my bet down."

"Sorry," said Mr. Calhoun. "Please proceed, Mr. Locke."

Clocker rested his knuckles on the table and leaned over them. "I have to take your word you ain't human, but you don't have to take mine. I never worried about anybody but Zelda and myself; that makes me human. All I want is to get along and not hurt anybody if I can help it; that makes me what some people call the common man. Some of my best friends are common men. Come to think of it, they all are. They wouldn't want to get extinct. If we do, it won't be our fault."

Several of the men nodded sympathetic agreement.

"I don't read much except the sport sheets, but I got an idea what's coming up," Clocker continued, "and it's a long shot that any country can finish in the money. We'd like to stop war for good, all of us. Little guys who do the fighting and the dying. Yeah, and lots of big guys, too. But we can't do it alone."

"That's precisely our point," said Calhoun.

"I mean us back on Earth. People are afraid, but they just don't know for sure that we can knock ourselves off. Between these catatonics and me, we could tell them what it's all about. I notice you got people from all over the world here, all getting along fine because they have a job to do and no time to hate each

other. Well, it could be like that on Earth. You let us go back and you'll see a selling job on making it like up here like you never saw before."

Mr. Calhoun and Dr. Harding looked at each other and around the table. Nobody seemed willing to answer.

Mr. Calhoun finally sighed and got out of his big chair. "Mr. Locke, besides striving for international understanding, we have experimented in the manner you suggest. We released many of our human associates to tell what our science predicts on the basis of probability. A human psychological mechanism defeated us."

"Yeah?" Clocker asked warily. "What was that?"

"Protective amnesia. They completely and absolutely forgot everything they had learned here."

CLOCKER slumped a bit. "I know. I talked to some of these 'cured' catatonics—people you probably sprung because you got all you wanted from them. They didn't remember anything." He braced again. "Look, there has to be a way out. Maybe if you snatch these politicians in all the countries, yank them up here, they couldn't stumble us into a war."

"Examine your history," said Dr. Harding sadly, "and you will

find that we have done this experimentally. It doesn't work. There are always others, often more unthinking, ignorant, stupid or vicious, ready to take their places."

Clocker looked challengingly at every member of the board of directors before demanding, "What are the odds on me remembering?"

"You are our first volunteer," said a little man at the side of the table. "Any answer we give would be a guess."

"All right, guess."

"We have a theory that your psychic censor might not operate. Of course, you realize that's only a theory—"

"That ain't all I don't realize. What's it mean?"

"Our control, regrettably, is a wrench to the mind. Lifting it results in amnesia, which is a psychological defense against disturbing memories."

"I walked into this, don't forget," Clocker reminded him. "I didn't know what I was getting into, but I was ready to take anything."

"That," said the little man, "is the unknown factor. Yes, you did submit voluntarily and you were ready to take anything—but were you psychologically prepared for this? We don't know. We think there may be no characteristic wrench—"

"Meaning I won't have amnesia?"

"Meaning that you may not. We cannot be certain until a test has been made."

"Then," said Clocker, "I want a deal. It's Zelda I want; you know that, at any rate. You say you're after a record of us in case we bump ourself off, but you also say you'd like us not to. I'll buy that. I don't want us to, either, and there's a chance that we can stop it together."

"An extremely remote one," Mr. Calhoun stated.

"Maybe, but a chance. Now if you let me out and I'm the first case that don't get amnesia, I can tell the world about all this. I might be able to steer other guys, scientists and decent politicians, into coming here to get the dope straighter than I could. Maybe that'd give Earth a chance to cop a pardon on getting extinct. Even if it don't work, it's better than hanging around the radio waiting for the results."

DR. HARDING hissed on his glasses and wiped them thoughtfully, an adopted mannerism, obviously, because he seemed to see as well without them. "You have a point, Mr. Locke, but it would mean losing your contribution to our archives."

"Well, which is more impor-

tant?" Clocker argued. "Would you rather have my record than have us save ourself?"

"Both," said Mr. Calhoun. "We see very little hope of your success, while we regard your knowledge as having important sociological significance. A very desirable contribution."

The others agreed.

"Look, I'll come back if I lame out," Clocker desperately offered. "You can pick me up any time you want. But if I make headway, you got to let Zelda go, too."

"A reasonable proposition," said Dr. Harding. "I call for a vote."

They took one. The best Clocker could get was a compromise.

"We will lift our control," Mr. Calhoun said, "for a suitable time. If you can arouse a measurable opposition to racial suicide—measurable, mind you; we're not requiring that you reverse the lemming march alone—we agree to release your wife and revise our policy completely. If, on the other hand, as seems more likely—"

"I come back here and go on giving you the inside on racing," Clocker finished for him. "How much time do I get?"

Dr. Harding turned his hands palm up on the table. "We do not wish to be arbitrary. We

earnestly hope you gain your objective and we shall give you every opportunity to do so. If you fail, you will know it. So shall we."

"You're pretty sure I'll get scratched, aren't you?" Clocker asked angrily. "It's like me telling a jockey he don't stand a chance—he's whammied before he even gets to the paddock. Anybody'd think do-gooders like you claim you are would wish me luck."

"But we do!" exclaimed Mr. Calhoun. He shook Clocker's hand warmly and sincerely. "Haven't we consented to release you? Doesn't this prove our honest concern? If releasing all our human associates would save humanity, we would do so instantly. But we have tried again and again. And so, to use your own professional terminology, we are hedging our bets by continuing to make our anthropological record until you demonstrate another method . . . if you do."

"Good enough," approved Clocker. "Thanks for the kind word."

The other board members followed and shook Clocker's hand and wished him well.

Barnes, being last, did the same and added, "You may see your wife, if you care to, before you leave."

"If I care to?" Clocker re-





pested. "What in hell do you think I came here for in the first place?"

**Z**ELDA was brought to him and they were left alone in a pleasant reading room. Soft music came from the walls, which glowed with enough light to read by. Zelda's lovely face was warm with emotion when she sat down beside him and put her hands in his.

"They tell me you're leaving, hon," she said.

"I made a deal, baby. If it works—well, it'll be like it was before, only better."

"I hate to see you leave. Not just for me," she added as he lit up hopefully. "I still love you, hon, but it's different now. I used to want you near me every minute. Now it's loving you without starving for you. You know what I mean?"

"That's just the control they got on you. It's like that with me, too, only I know what it is and you don't."

"But the big thing is the project. Why, we're footnotes in history! Stay here, hon. I'd feel so much better knowing you were here, making your contribution like they say."

He kissed her lips. They were soft and warm and clinging, and so were her arms around his neck. This was more like the Zelda he

had been missing.

"They gave you a hypo, sweetheart," he told her. "You're hooked; I'm not. Maybe being a footnote is more important than doing something to save our skin, but I don't think so. If I can do anything about it, I want to do it."

"Like what?"

"I don't know," he admitted. "I'm hoping I get an idea when I'm paroled."

She nuzzled under his chin. "Hon, I want you and me to be footnotes. I want it awful bad."

"That's not what really counts, baby. Don't you see that? It's having you and stopping us humans from being just a bunch of old footnotes. Once we do that, we can always come back here and make the record, if it means that much to you."

"Oh, it does!"

He stood and drew her up so he could hold her more tightly. "You do want to go on being my wife, don't you, baby?"

"Of course! Only I was hoping it could be here."

"Well, it can't. But that's all I wanted to know. The rest is just details."

He kissed her again, including the side of her neck, which produced a subdued wriggle of pleasure, and then he went back to the Administration Building for his release.

**A** WAKENING was no more complicated than opening his eyes, except for a bit of foggi-ness and fatigue that wore off quickly, and Clocker saw he was in a white room with a doctor, a nurse and an orderly around his bed.

"Reflexes normal," the doctor said. He told Clocker, "You see and hear us. You know what I'm saying."

"Sure," Clocker replied. "Why shouldn't I?"

"That's right," the doctor evaded. "How do you feel?"

Clocker thought about it. He was a little thirsty and the idea of a steak interested him, but otherwise he felt no pain or confusion. He remembered that he had not been hungry or thirsty for a long time, and that made him recall going over the border after Zelda.

There were no gaps in his recollection.

He didn't have protective amnesia.

"You know what it's like there?" he asked the doctor eagerly. "A big place where everybody from all over the world tell these aliens about their job or racket." He frowned. "I just remembered something funny. Wonder why I didn't notice it at the time. Everybody talks the same language. Maybe that's because there's only one language

for thinking." He shrugged off the problem. "The guys who run the shop take it all down as a record for whoever wants to know about us a zillion years from now. That's on account of us humans are about to close down the track and go home."

The doctor bent close intently. "Is that what you believe now or—while you were—disturbed?"

Clocker's impulse to blurt the whole story was stopped at the gate. The doctor was staring too studiously at him. He didn't have his story set yet; he needed time to think, and that meant getting out of this hospital and talking it over with himself.

"You kidding?" he asked, using the same grin that he met complainers with when his turf predictions went sour. "While my head was out of the stirrups, of course."

The doctor, the nurse and the orderly relaxed.

**I** OUGHT to write a book," Clocker went on, being doggedly humorous. "What screwball ideas I got! How'd I act?"

"Not bad," said the orderly. "When I found you yakking in your wife's room, I thought maybe it was catching and I'd better go find another job. But Doc here told me I was too stable to go psychotic."

"I wasn't any trouble?"

"Nah. All you did was talk about how to handicap races. I got quite a few pointers. Hell, you went over them often enough for anybody to get them straight!"

"I'm glad somebody made a profit," said Clöcker. He asked the doctor, "When do I get out of here?"

"We'll have to give you a few tests first."

"Bring them on," Clöcker said confidently.

They were clever tests, designed to trip him into revealing whether he still believed in his delusions. But once he realized that, he meticulously joked about them.

"Well?" he asked when the tests were finished.

"You're all right," said the doctor. "Just try not to worry about your wife, avoid overworking, get plenty of rest—"

Before Clöcker left, he went to see Zelda. She had evidently recorded the time-step satisfactorily, because she was on a soft-shoe routine that she must have known cold by the time she'd been ten.

He kissed her unresponsive mouth, knowing that she was far away in space and could not feel, see or hear him. But that didn't matter. He felt his own good, honest, genuine longing for her, unchecked by the aliens' control of emotions.

"I'll spring you yet, baby," he said. "And what I told you about that big apartment on Riverside Drive still goes. We'll have a time together that ought to be a footnote in history all by itself. I'll see you . . . after I get the real job done."

He heard the soft-shoe rhythm all the way down the corridor, out of the hospital, and clear back to the city.

CLOCKER'S bank balance was sick, the circulation of his tip sheet gone. But he didn't worry about it; there were bigger problems.

He studied the newspapers before even giving himself time to think. The news was as bad as usual. He could feel the heat of fission, close his eyes and see all the cities and farms in the world going up in a blinding cloud. As far as he was concerned, Barnes and Harding and the rest weren't working fast enough; he could see doom sprinting in half a field ahead of the completion of the record.

The first thing he should have done was recapture the circulation of the tip sheet. The first thing he actually did do was write the story of his experience just as it had happened, and send it to a magazine.

When he finally went to work on his sheet, it was to cut down

the racing data to a few columns and fill the rest of it with warnings.

"This is what you want?" the typesetter asked, staring at the copy Clocker turned in. "You sure this is what you want?"

"Sure I'm sure. Set it and let's get the edition out early. I'm doubling the print order."

"Doubling?"

"You heard me."

When the issue was out, Clocker waited around the main newsstands on Broadway. He watched the customers buy, study unbelievably, and wander off looking as if all the tracks in the country had burned down simultaneously.

Doc Hawkins found him there.

"Clocker, my boy! You have no idea how anxious we were about you. But you're looking fit, I'm glad to say."

"Thanks," Clocker said abstractedly. "I wish I could say the same about you and the rest of the world."

Doc laughed. "No need to worry about us. We'll muddle along somehow."

"You think so, huh?"

"Well, if the end is approaching, let us greet it at the Blue Ribbon. I believe we can still find the lads there."

They were, and they greeted Clocker with gladness and drinks. Diplomatically, they made only

the most delicate references to the revamping job Clocker had done on his tip sheet.

"It's just like opening night, that's all," comforted Arnold Wilson Wyle. "You'll get back into your routine pretty soon."

"I don't want to," said Clocker pugnaciously. "Handicapping is only a way to get people to read what I really want to tell them."

"Took me many minutes to find horses," Oil Pocket put in. "See one I want to bet on, but rest of paper make me too worried to bother betting. Okay with Injun, though—horse lost. And soon you get happy again, stick to handicapping, let others worry about world."

Buttonhole tightened his grip on Clocker's lapel. "Sure, boy. As long as the bobtails run, who cares what happens to anything else?"

"Maybe I went too easy," said Clocker tensely. "I didn't print the whole thing, just a little part of it. Here's the rest."

THEY were silent while he talked, seeming stunned with the terrible significance of his story.

"Did you explain all this to the doctors?" Doc Hawkins asked.

"You think I'm crazy?" Clocker retorted. "They'd have kept me packed away and I'd

never get a crack at telling anybody."

"Don't let it trouble you," said Doc. "Some vestiges of delusion can be expected to persist for a while; but you'll get rid of them. I have faith in your ability to distinguish between the real and unreal."

"But it all happened! If you guys don't believe me, who will? And you've got to so I can get Zelda back!"

"Of course, of course," said Doc hastily. "We'll discuss it further some other time. Right now I really must start putting my medical column together for the paper."

"What about you, Handy Sam?" Clocker challenged.

Handy Sam, with one foot up on the table and a pencil between his toes, was doodling self-consciously on a paper napkin. "We all get these ideas, Clocker. I used to dream about having arms and I'd wake up still thinking so, till I didn't know if I did or didn't. But like Doc says, then you figure out what's real and it don't mix you up any more."

"All right," Clocker said beligerently to Oil Pocket. "You think my story's batty, too?"

"Can savvy evil spirits, good spirits," Oil Pocket replied with stolid tact. "Injun spirits, though, not white ones."

"But I keep telling you they

ain't spirits. They ain't even human. They're from some world way across the Universe—"

Oil Pocket shook his head. "Can savvy Injun spirits, Clocker. No spirits, no savvy."

"Look, you see the mess we're all in, don't you?" Clocker appealed to the whole group. "Do you mean to tell me you can't feel we're getting set to blow the joint? Wouldn't you want to stop it?"

"If we could, my boy, gladly," Doc said. "However, there's not much that any individual or group of individuals can do."

"But how in hell does anything get started? With one guy, two guys—before you know it, you got a crowd, a political party, a country—"

"What about the other countries, though?" asked Buttonhole. "So we're sold on your story in America, let's say. What do we do—let the rest of the world walk in and take us over?"

"We educate them," Clocker explained despairingly. "We start it here and it spreads to there. It doesn't have to be everybody. Mr. Calhoun said I just have to convince a few people and that'll show them it can be done and then I get Zelda back."

Doc stood up and glanced around the table. "I believe I speak for all of us, Clocker, when I state that we shall do all with-

in our power to aid you."

"Like telling other people?"  
Clocker asked eagerly.

"Well, that's going pretty—"

"Forget it, then. Go write your column. I'll see you chumps around—around ten miles up, shaped like a mushroom."

He stamped out, so angry that he untypically let the others settle his bill.

CLOCKER'S experiment with the newspaper failed so badly that it was not worth the expense of putting it out; people refused to buy. Clocker had three-sheets printed and hired sandwich men to parade them through the city. He made violent speeches in Columbus Circle, where he lost his audience to revivalist orators; Union Square, where he was told heatedly to bring his message to Wall Street; and Times Square, where the police made him move along so he wouldn't block traffic. He obeyed, shouting his message as he walked, until he remembered how amusedly he used to listen to those who cried that Doomsday was near. He wondered if they were catatonics under imperfect control. It didn't matter; nobody paid serious attention to his or their warnings.

The next step, logically, was a barrage of letters to the heads of nations, to the U.N., to editors of newspapers. Only a few of his

letters were printed. The ones in Doc's tabloid did best, drawing such comments as:

"Who does this jerk think he is, telling us everybody's going to get killed off? Maybe they will, but not in Brooklyn!"

"When I was a young girl, some fifty years ago, I had a similar experience to Mr. Locke's. But my explanation is quite simple. The persons I saw proved to be my ancestors. Mr. Locke's new-found friends will, I am sure, prove to be the same. The World Beyond knows all and tells all, and my Control, with whom I am in daily communication Over There, assures me that mankind is in no danger whatever, except from the evil effects of tobacco and alcohol and the disrespect of youth for their elders."

"The guy's nuts! He ought to go back to Russia. He's nothing but a nut or a Communist and in my book that's the same thing."

"He isn't telling us anything new. We all know who the enemy is. The only way to protect ourselves is to build TWO GUNS FOR ONE!"

"Is this Locke character selling us the idea that we all ought to go batty to save the world?"

Saddened and defeated, Clocker went through his accumulated mail. There were politely non-committal acknowledgments

from embassies and the U.N. There was also a check for his article from the magazine he'd sent it to; the amount was astonishingly large.

He used part of it to buy radio time, the balance for ads in rural newspapers and magazines. City people, he figured, were hardened by publicity gags, and he might stir up the less suspicious and sophisticated hinterland. The replies he received, though, advised him to buy some farmland and let the metropolises be destroyed, which, he was assured, would be a mighty good thing all around.

The magazine came out the same day he tried to get into the U.N. to shout a speech from the balcony. He was quietly surrounded by a uniformed guard and moved, rather than forced, outside.

HE went dejectedly to his hotel. He stayed there for several days, dialing numbers he selected randomly from the telephone book, and getting the brushoff from business offices, housewives and maids. They were all very busy or the boss wasn't in or they expected important calls.

That was when he was warmly invited by letter to see the editor of the magazine that had bought his article.

Elated for actually the first time since his discharge from the hospital, Clocker took a cab to a handsome building, showed his invitation to a pretty and courteous receptionist, and was escorted into an elaborate office where a smiling man came around a wide bleached-mahogany desk and shook hands with him.

"Mr. Locke," said the editor, "I'm happy to tell you that we've had a wonderful response to your story."

"Article," Clocker corrected.

The editor smiled. "Do you produce so much that you can't remember what you sold us? It was about—"

"I know," Clocker cut in. "But it wasn't a story. It was an article. It really—"

"Now, now. The first thing a writer must learn is not to take his ideas too seriously. Very dangerous, especially in a piece of fiction like yours."

"But the whole thing is true!"

"Certainly—while you were writing it." The editor shoved a pile of mail across the desk toward him. "Here are some of the comments that have come in. I think you'll enjoy seeing the reaction."

Clocker went through them, hoping anxiously for no more than a single note that would show his message had come



through to somebody. He finished and looked up blankly.

"You see?" the editor asked proudly. "You're a find."

"The new Mark Twain or Jonathan Swift. A comic."

"A satirist," the editor amended. He leaned across the desk on his crossed forearms. "A mail response like this indicates a talent worth developing. We would like to discuss a series of stories—"

"Articles."

"Whatever you choose to call them. We're prepared to—"

"You ever been off your rocker?" Clocker asked abruptly.

**T**HE editor sat back, smiling with polite puzzlement. "Why, no."

"You ought to try it some time." Clocker lifted himself out of the chair and went to the door. "That's what I want, what I was trying to sell in my article. We all ought to go to hospitals and get ourself let in and have these aliens take over and show us where we're going."

"You think that would be an improvement?"

"What wouldn't?" asked Clocker, opening the door.

"But about the series—"

"I've got your name and address. I'll let you know if anything turns up. Don't call me; I'll call you."

Clocker closed the door behind him, went out of the handsome building and called a taxi. All through the long ride, he stared at the thinning out of the city, the huddled suburban communities, the stretches of grass and well-behaved woods that were permitted to survive.

He climbed out at Glendale Center Hospital, paid the hackle, and went to the admitting desk. The nurse gave him a smile.

"We were wondering when you'd come visit your wife," she said. "Been away?"

"Sort of," he answered, with as little emotion as he had felt while he was being controlled. "I'll be seeing plenty of her from now on. I want my old room back."

"But you're perfectly normal!"

"That depends on how you look at it. Give me ten minutes alone and any brain vet will be glad to give me a cushioned room."

Hands in his pockets, Clocker went into the elevator, walked down the corridor to his old room without pausing to visit Zelda. It was the live Zelda he wanted to see, not the tapping automaton.

He went in and shut the door.

**O**KAY, you were right and I was wrong," Clocker told the board of directors. "Turn me

over to Barnes and I'll give him the rest of the dope on racing. Just let me see Zelda once in a while and you won't have any trouble with me."

"Then you are convinced that you have failed," said Mr. Calhoun.

"I'm no dummy. I know when I'm licked. I also pay anything I owe."

Mr. Calhoun leaned back. "And so do we, Mr. Locke. Naturally, you have no way of detecting the effect you've had. We do. The result is that, because of your experiment, we are gladly revising our policy."

"Huh?" Clocker looked around at the comfortable aliens in their comfortable chairs. Solid and respectable, every one of them. "Is this a rib?"

"Visits to catatonics have increased considerably," explained Dr. Harding. "When the visitors are alone with our human associates, they tentatively follow the directions you gave in your article. Not all do, to be sure; only those who feel as strongly about being with their loved ones as you do about your wife."

"We have accepted four voluntary applicants," said Mr. Calhoun.

Clocker's mouth seemed to be filled with cracker crumbs that wouldn't go down and allow him to speak.

"And now," Dr. Harding went on, "we are setting up an Information Section to teach the applicants what you have learned and make the same arrangement we made with you. We are certain that we shall, before long, have to increase our staff as the number of voluntary applicants increases geometrically, after we release the first few to continue the work you have so admirably begun."

"You mean I made it?" Clocker croaked unbelievably.

"Perhaps this will prove it to you," said Mr. Calhoun.

He motioned and the door opened and Zelda came in.

"Hello, hon," she said. "I'm glad you're back. I missed you."

"Not like I missed you, baby! There wasn't anybody controlling my feelings."

Mr. Calhoun put his hands on their shoulders. "Whenever you care to, Mr. Locke, you and your wife are free to leave."

Clocker held Zelda's hands and her calmly fond gaze. "We owe these guys plenty, baby," he said to her. "We'll help make the record before we take off. Ain't that what you want?"

"Oh, it is, hon! And then I want you."

"Then let's get started," he said. "The quicker we do, the quicker we get back."

—H. L. GOLD

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